LUND UNIVERSITY
School of Economics and Management

Master's Program in Economic Growth, Population and Development

DID ECONOMIC DEVELOPMENT AND ECONOMIC GROWTH CONTRIBUTE TO THE DEMOCRATIZATION IN LATIN AMERICA IN THE 1980s?

Modernization theory revisited

by

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Abstract: Democratic transitions have been associated with a high level of economic development and good economic performance according to modernization theory. However, until now no consensus has been reached about the specific *form* of the relationship. Thus, this study attempts to examine whether these suggested linkages hold evidence for the case example of Latin America by testing a linear as well as a curvilinear relationship running from the level of economic development to gradual improvements of the level of democracy. Likewise, the prevalence of a relationship between economic growth and democratization has been explored. Using an own composed data set that includes 20 Latin American countries over the period 1975 to 2008, a logistic regression is used to test the hypotheses on democratization derived from modernization theory. Results cannot confirm the predicted relationship between the level of economic development and economic performance on democratizations in Latin America. Especially, economic growth appears as an important factor in this analysis that is decreasing the likelihood of gradual improvements of the level of democracy in the region.

Key words: Latin America, Democratization, Modernization Theory, Economic Development, Economic Growth, Third Wave of Democracy

EKHS21
Master's Thesis (15 credits ECTS)
May 2017
Supervisor: Mikołaj Malinowski, Kathryn Gary
Examiner: Prof. Anders Nilsson
Word Count: 22163

Acknowledgements

First, I would like to thank both Mikołaj Malinowski and Kathryn Gary for their excellent supervision, constructive feedback and guidance throughout the thesis period. Second, I like to thank everyone that has otherwise promoted me in my writing process in Lund, especially Siddharta Aradhya and Luis Adrián Serratos Sotelo who helped me with my empirical analysis. Third, special thanks go to my student colleagues Eleanor Hinde, Karoline Jensen Alnes and Jan Peters who supported me with their enthusiasm and assistance in my thesis period. Lastly, I would like to thank my mother for all her support in my studies.

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1 Introduction

The remarkable democratization of Latin America in the 1980s has been a political phenomenon that rekindled the debate about the driving forces of democratic transitions. Just three countries have been democracies in this region in 1978: Colombia, Costa Rica and Venezuela (Mainwaring & Pérez-Liñán, 2005, p. 17). In the 1990s, nearly all states of the continent outlined democratic regimes[1]. Hence, what were the underlying causes of this transition?

Many attempts have been undertaken to identify the relevant factors. Despite a lack of consensus, the modernization theory and Samuel Huntington´s (1991a; 1991b) established concept "Democracy´s Third Wave" appear as noteworthy contributions in this context. Both approaches identify besides other factors *economic development* and *economic growth* as structural determinants of democratic transition. Whereby Huntington´s concept applies to all regions that underwent a democratic transition in the 1980s, including Latin America, modernization theory offers more widespread explanations with respect to the modernization process of nation states[2]. In general, modernization theory postulates a linear process of development from traditional to modern societies along the features of industrialization, democratization, urbanisation and secularization (Mergel, 2011). The theory originated in the 1950s and 1960s and aimed to explain the developments and patterns of modernization mostly determined by the post-Second World War era (Mergel, 2011; Tipps, 1973). One of these patterns is the linkage between economic development and democratization that is of interest in this study. This relationship can be traced back to Seymour Lipset (1959, p. 72), who aimed with his work to identify social conditions that support democratic systems. He provided empirical evidence that democracy correlates with the state of economic development that he used as a proxy for modernization[3]. Thus, according to his results economic development can be perceived as a catalyst and a prerequisite of democratization (Lipset, 1959, p. 85).

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[1] With the exceptions of Cuba and Haiti.

[2] Huntington´s "Democracy's Third Wave" refers besides Latin America to the regions South East Asia, Eastern Europe and in parts sub-Saharan Africa.

[3] Lipset (1959, p. 80) operationalized economic development by measures of industrialization, urbanization, wealth and education.

Shifting the point of observation on Huntington´s (1991a, pp. 30-31) concept, the linkage between economic development and democracy is likewise evident. Huntington identified two different economic relationships that determine the probability of a political transition from an authoritarian regime to a democracy[4]. First, the *economic performance* of an authoritarian regime conditions the probability of a regime change towards democracy. Economic performance is an important prerequisite to stimulate the demands of its citizens and to prevent political unrest. Authoritarian regimes are more dependent on economic performance than democratic regimes, since economic failure manifests the political inability of the whole system in the first case, whereas in the latter case political actors can be punished for the absence of economic success (Huntington, 1991a, p. 27). Huntington (1991a, pp. 13) calls this the "performance legitimacy" of political regimes. Thus, good economic performance in terms of *short-term economic indicators* decreases the likelihood for a regime change from authoritarian to democratic regimes since the political actor is judged upon its economic achievements. Secondly, the probability of a democratic transition increases if a state presents a sufficient *level of economic development* that promotes the expansion of the middle class through higher living standards and a better access to education as a consequence of a *long-term development*. This level of economic development determines the economic stratum in which a democratization is most likely to happen and has been defined by Huntington as the "political transition zone" (1991a, p. 31; 1991b, p. 61). The least likely are transitions at the tails of the economic stratum: "In poor countries democratization is unlikely; in rich countries it has already occurred." (Huntington, 1991b, p. 60) Hence, Huntington suggests a rather *curvilinear relationship* between the level of economic development and democratic transitions that contradicts Lipset´s imputed linear relationship[5]. Although both presented concepts identify the level of economic development and economic growth as important factors of democratic transitions, no consensus has been reached so far about *the form of the relationship* and about the *causal mechanisms* between the structural economic factors and democratic transitions (Epstein et al. 2006; Casper

[4] According to Huntington (1991a, pp. 13), additional non-economic factors are increasing the likelihood of democratic transitions as well. Since the interest of this study is limited to economic factors, no comprehensive presentation of all factors have been undertaken.

[5] Although Huntington never refers to Lipset, he disagrees with the implications of modernization theory. Explicitly he states: "Modernization in practice always involves change in and usually the disintegration of a traditional political system, but it does not necessarily involve significant movement toward a modern political system." (1968, p. 35)

& Tufis, 2003). Whereas this study is going to address the first issue about the specific form of the relationship, the issue of reverse causality raises the question of endogeneity that lies beyond the scope of this thesis.

Against the background of these contributions, Latin America presents an interesting regional case for this study, since the third wave of democratization was coupled with an increased level of economic development and economic growth during the pre-1980s period[6]. Nevertheless, the initial phase of the third wave of democratization was led by the rather poor countries of the region. The Dominican Republic democratized in 1978, followed by Ecuador in 1979 and Peru in 1980. On the contrary, Chile as one of the most prosperous countries in the region, democratized just at the end of the third wave in 1989. This raises concerns about the validity of the modernization theory and its universal claim on the relationship between democratization and economic development and point rather to other regional factors that might contributed to the third wave of democratization. Thus, examining the potential linkage between economic development, economic growth and democratization is an essential requirement to shed more light on the suggested relationship for the region under consideration.

Based on the assumptions made by the modernization theory and Samuel Huntington, three concrete hypotheses about the relationship on economic development, economic growth and democracy have been derived: 1. The *level of economic development* as a long-term measure for economic performance increased the likelihood of gradual increases of the level of democracy in Latin America that occurred under the third wave of democratization following a *linear relationship*. 2. The *level of economic development* as a long-term measure for economic performance increased the likelihood of gradual increases of the level of democracy in Latin America that occurred under the third wave of democratization following a *curvilinear relationship*. 3. *Economic growth* as a short-term proxy for economic performance decreased the likelihood of gradual increases of the level of democracy in the post-1978 democratization in Latin America. Following this, this study empirically tests the hypotheses by applying a dynamic logit model that controls for country and year fixed effects to account for the heterogeneous characteristics of the Latin American countries (LAC). The operationalization of the main variables of these models follows the relevant literature on this subject. The Polity2 variable, provided by the Polity IV dataset, serves as the source for the binary measure of

[6] The third wave of democratization, the post-1978 democratization and the democratization in the 1980s are used as synonyms in this study and will henceforth refer to the democratic transition phase under consideration in this examination that occurred in the late 1970´s and the beginning 1980s and lasted until now.

democracy, henceforth called “democratization”. This limited dependent variable refers in this study to a year-to-year change in the democracy scale of each Latin American country that presents the unit of analysis. Therefore, the dependent variable of democratization should not be associated with a regime change in this context since it is only capturing gradual increases of the level of democracy and serves just as a relative measure of democracy improvements. The level of democracy refers to the prevalence of *institutional features* for a respective country that are characteristic for democracies. Specifically, the variable captures the change of the presence of following four characteristics that have been derived from the operational definition of democracy employed by Marshall, Gurr and Jaggers (2015, p. 15): Competitiveness of Executive Recruitment (1), Openness of Executive Recruitment (2), Constraint on Chief Executive (3) and Competitiveness of Political Participation (4). GDP per capita serves as a proxy for economic development that represents the long-term measure of economic performance. To the contrary, GDP growth has been utilized as a short-term measure for economic performance refers to a year-to-year change of the level of GDP per capita. Respective data has been derived from the Maddison project database. The control variables and proxies for economic development have mostly been derived from the Montevideo Oxford Latin American Database (MOxLAD) database containing the primary school enrolment rate and life expectancy. The covariates urban population and fuel exports have been derived from the World Bank Indicators (WDI). A detailed presentation of all variables and their sources can be derived as well from appendix A, table 8.1. A strongly balanced panel will be used covering the time span from 1975 - 2008 and encompassing a number of 20 Latin American countries.

The results provide augmented insights in the relationship between economic development, growth and political regimes in Latin America, examining whether democratic transitions are more likely to develop in an advanced economic environment. Although the theoretical and empirical literature on this subject already outlines a broad variety of explanations, specific quantitative analyses on the region of Latin America are rare[7]. While past examinations have addressed the relationship between economic development, economic growth and regime change in general in Latin America, specific studies focussing on economic performance and gradual increases of the level of democracy are itself missing (Mainwaring & Hagopian, 2005, p. 4). Thus, this survey is an attempt to meet this research gap by providing more insights about the relationship for this specific region. Examining the underlying factors

[7] The only quantitative analysis on this subject and on Latin America has been provided by Mainwaring & Pérez-Liñán (2005); see the authors own comment (Mainwaring&Hagopian, 2005, p. 4).

for the democratic transitions in Latin America offers potential and opportunity to shed light in the mechanisms behind these political developments. This is essential to identify the driving forces behind the democratization in Latin America and to estimate the role of economic development and economic growth for the democratic transition in this region. Thus, the contribution of this study is clearly classed among the field of comparative politics and international political economy that is concerned with the structural socio-economic conditions of democratization.

In aiming this, the survey will be structured as followed: Section 2 will provide an overview about the already existing empirical and theoretical literature on the relationship of economic development, economic growth and democracy. Moreover, this section will present the recent debate around the implications and scope of explanation of modernization theory tackling especially upon the explanation of the third wave of democracy in Latin America. Section 3 continues by presenting briefly the political and economic history of Latin America before the 1980s to provide a comprehensive context of the circumstances that preceded the third wave of democratization. Section 4 introduces the methodology that is used in this survey. First, the data sources will be presented by assessing their reliability, representativeness and validity. Secondly, some general descriptive statistics will be provided about the sample before section 5 continues with presenting the estimation method and procedure. Section 6 outlines the results of the applied dynamic logit model and lastly, section 7 concludes the main findings and discusses the limitations of this examination.

2 Literature Review

This section provides a presentation of the debate upon the relationship between economic development, economic growth and democratic transitions that has been suggested by modernization theory. However, the section just briefly touches upon the theoretical discussion while paying more attention to the empirical controversy in this field. These results serve as the theoretical base for the empirical analysis by deriving three quantifiable approaches that aim to explain democratic transitions. The literature review will chronologically cover first all general results regarding the subject and then refer to specific results addressing the relationship between economic factors and the democratization in Latin America in the 1980s.

The debate around factors of democratization became very popular in the 1970s in comparative politics in aiming to find fruitful policy implications for the newly independent countries. Among different attempts of explaining democratic transitions, especially modernization theory stands out that has experienced a resurgence in the current literature since new empirical techniques have been applicable and the data availability for cross-sectional investigations increased (Haggard & Kaufman, 2016). Simultaneously, modernization theory appears as pioneering work that presented economic development as a prerequisite for democratization and developed the largest amount of studies within comparative politics until now (see Przeworski et al. 2000). Ever since the examination of the form and direction of the suggested relationship underlying democratizations has received much attention from qualitative and quantitative literature. The most widespread argument that linked democratization and modernization has been formulated by Seymour M. Lipset (1959). In his popular work "Some Social Requisites of Democracy: Economic Development and Political Legitimacy", he suggested that the features of economic development - measured in terms of wealth, industrialization, urbanization and education - contributed likewise to the emergence and consolidation of democracy8. In this logic, these socio-economic factors have been identified by the scholar as necessary conditions, but not as causes for democracy. Lipset´s theoretical linkages rely mostly on the economic development condition of wealth that promotes democratic transitions through different channels. Drawing on Marx, the scholar especially underlines the political empowerment of the middle-class that plays an important role in mediating social conflict within the society (Lipset, 1959, p. 83). Thus, a growing middle-class appears as a threat for elites that aim to concentrate their power. To the contrary, in highly unequal societies elites are able to exploit their political advantageous position. They resist democracy because this could lead to a changing status quo (Lipset, 1959, p. 84). Besides an empowered middle-class, the scholar argues that the level of income alters the receptiveness of democratic political norms and decreases the acceptance of contrary political ideologies (Lipset, 1959, p. 84). Likewise, Lipset (1959) identifies the prevalence of organizations as an additional channel through which wealth is catalysing democratization that fulfils a similar role like a growing middle-class. Organizations can put constraints on the political sphere of elites

[8] While economic development has been associated not only with the emergence but as well with the consolidation of democracy, this study is just concerned with the emergence of democratization. Hence, the main attention of this section relies on the review of literature dealing with the nature of democratization and not the consolidation of democracy.

by acting as countervailing power in the society and contribute to political pluralism (Lipset, 1959, p. 84). Thus, according to Lipset´s reading the emphasis on wealth as an important aspect for democratic transitions results especially out of its alleviating effect on *distributional conflicts* that is manifested by an increased distribution of power within a society. A growing middle-class or organizations appear as politically empowered actors on the political field that are able to influence the allocation of resources within a society. With respect to the remaining features of economic development, industrialization, urbanization and education, just the latter aspect receives a detailed justification from the scholar. Lipset emphasizes the importance of education for shaping a democratic political culture that inherently demands pluralism and political liberalism (Lipset, 1959, p. 79). Based on these assumptions he infers that "[…] the factors subsumed under economic development carry the political correlate of democracy." (Lipset, 1959, p. 80) Again, it appears evident that Lipset carefully presented his results as correlations, but was never imputing any causality between economic development and democracy. Although the scholar avoided making any assumption about the direction of the relationship, his inferences still indicated a linear relationship between economic development and democratization: Whenever an authoritarian regime develops in economic terms, it is a natural consequence that the regime will become democratic at one time. Therefore, the mechanism imputed by Lipset coined the approach of *endogenous democratization* (Boix & Stokes, 2003; Przeworski et al. 2000). Hence, Lipset perceived the level of economic development not only as a mean for the process of modernization but identified it likewise as a facilitating factor for democratization. Contrary to Lipset, Samuel Huntington, who focussed on regime stability, associated modernization with political disorder in his earliest work on this subject (1968). Although the scholar recognized similar determinants of modernization by allowing economic development to have a likewise important role he assumed different mechanisms. Huntington based his theoretical fundament on *two categories* that are crucial for political modernization. Besides economic development, the scholar highlights the importance of *social mobilization* as a separate factor (Huntington, 1968, pp. 33). Whereas Lipset treats economic development as an aggregate of wealth, industrialization, urbanization and education and does not explicitly differentiate between specific mechanisms, Huntington perceives economic development rather as a category that just represents economic growth and output of a society that would equal Lipset´s indicator of wealth. Education and urbanization belong in Huntington´s concept to the second category of social mobilization. Following this logic, economic development provides just the material means to increase the capabilities for

modernization whereas social mobilization as a separate factor is likewise necessary to shape the beliefs and aspirations towards modernization (Huntington, 1968, pp. 33). Although Huntington clearly distinguishes between those two factors, the level of social mobilization is inevitably connected to the level of economic development. A rising level of the latter factor increases simultaneously the level of education and literacy within the society and hence alters aspirations and beliefs (Huntington, 1968, pp. 50 - 51). From Huntington's point of view, especially higher levels of social mobilization result in political instability, rather than democratization. His main argument rests on the assumption that the changes of patterns in education and urbanization following modernization extents political consciousness and broadens political participation. Since traditional political institutions cannot keep up with the pace of political modernization and do not meet the new aspirations of the society the political system becomes fragile. Thus, he infers that modernization leads to disorder in a society due to increased levels of social mobilization and economic development (Huntington, 1968, p. 5, p. 86)[9]. The presented conceptual difference of the elements of modernization highlights two aspects: First, Lipset identifies economic development more as an *indirect mediator* of modernization that actually accounts for different conditions - like wealth, urbanization, industrialization and wealth - that are facilitating democratization. Secondly, despite the emphasis on economic development that has been shared by both approaches, no theoretical consensus has been reached about the specific mechanisms of this structural factor on modernization and democratization. However, most relevant for the purpose of this study will be the assumed effects of wealth on democratization as suggested by Lipset.

If paying more attention to the empirical controversy regarding the relationship, again the contribution of Lipset stands out as it accounts for one of the first empirical cross-country studies that have been undertaken upon this subject (Wucherpfenning & Deutsch, 2009). Lipset´s inferences were not only derived from theory but based as well on cross-sectional correlations of 48 countries that have been divided into two groups of more and less democratic regions by indices of his economic development proxies, wealth, industrialization, education and urbanization[10]. These results indicated for all regions higher economic development levels for stable democracies and lower levels for dictatorships (Lipset, 1959, pp. 75). Although Lipset assumed that the level of economic development is crucial for the emergence of democracies,

[9] Huntington changed his view on modernization in his later contribution "The Third Wave" that he published in 1991, where he considered modernization as a promoting factor of democratization.
[10] Lipset (1959, pp. 75) utilized per capita income as a measure for wealth.

he suggested in another study that rapid economic growth would be a threat for democracies due to an increase of extremism and political polarization as a consequence of industrialization (Lipset, 1963, p. 54). Latter argument finds support by contributions of Olson (1963) and Huntington (1968). Olson (1963, pp. 532) argued that economic growth leads to a redistribution of income within the society, loosening old patterns of social order that result in groups of individuals that are déclassé. Following this logic, individuals of these groups are more conducive to revolutionary protest since they lost their established position within the society and appear as a threat for political stability (Olson, 1963, pp. 532). Besides Olson, Huntington (1968) perceived economic growth likewise as a destabilizing force. Although he admits that economic growth increases the well-being of individuals, he assumed that social frustration resulting out of rapid growth rates exceeds the benefits of growth (1968, p. 50). Following a similar argumentation as Olson, he highlighted the effect of economic growth that increases both societal demands and income inequality and causes a loosening of traditional social ties that can lead to political disorder. However, Huntington likewise underlined that the destabilizing effect of economic growth is conditioned on the level of economic development. Rapid economic growth is less likely to contribute to political instability in poor and rich countries (Huntington, 1968, p. 53). Thus, he concludes at another point "[i]t is not the absence of modernity but the efforts to achieve it which produce political disorder." (1968, p. 41) Since any kind of political instability can create a potential point of departure for a democratization, these contributions are of relevance for the study of economic growth and democratizations.

The process of endogenous democratization following the approach of modernization theory has been likewise highly disputed on empirical grounds. For instance, Adam Przeworski and Fernando Limongi (1997) and later Przeworski et al. (2000)[11] attacked Lipset´s view by stressing the importance of exogenous and random factors for the political transition from dictatorship to democracy. Their work presents the most powerful critique of modernization theory that has been likewise agenda setting and coined the "exogenous democratization" approach (Przeworski & Limongi, 1997; Przeworski et al. 2000; Boix & Stokes, 2003, p. 544). In contrast to Lipset, the scholars were examining *regime change* and *durability* instead of only focussing on the *emergence of democracy*. From their point of view, the imputed endogeneity implication of democracy as a natural consequence of the modernization process of a country

[11] Prezworski´s and Limongi´s (1997) initial results have been published later in a more comprehensive manner in their book "Democracy and Development" that has been co-authored by Micheal E. Alvarez and José Antonio Cheibub, cited as Przeworski et al. (2000). Henceforth this study refers to both of their work.

is misleading (cf. Przeworski & Limongi, 1997; Przeworski et al. 2000). “Rather, democracy appears exogenously as a deus ex machina. It survives if a country is "modern," but it is not a product of "modernization."” (Przeworski & Limongi, 1997, p. 156) Indeed, their empirical results questioned Lipset´s inference of a linear relationship from economic development to democracy. A linear relationship would imply the prevalence of an economic development threshold that marks the regime transition from dictatorships to democracies (Przeworski et al. 2000, p. 97). In aiming to examine this threshold, the scholars calculated transition probabilities for different levels of economic development based on a dichotomous measure for democracy and panel data encompassing 135 countries with a temporal coverage from 1950 until 1990. This procedure was conducted by a dynamic probit model. The results did not provide evidence for a linear relationship running from higher levels of economic development to democracy since no threshold could be identified (Przeworski et al. 2000, p. 97, p. 136; Przeworski & Limongi, 1997, p. 146). Hence, the scholars concluded that the emergence of democracy out of authoritarian regimes could be at most a result of a non-linear relationship (Przeworski et al. 2000, p. 103). Although Przeworski et al. (2000, p. 103) neglected the impact of economic development on *democratization* following an endogenous evolvement they stressed that economic development promotes the *consolidation of democracy*, whenever democratic rule has already been in place. Their results presented, that no democracy that outlined a GDP per capita above 6,055 1985 PPP Dollars, the GDP level of Argentina in 1975, ever reversed (Przeworski et al. 2000, p. 106). Nonetheless, Przeworski et al. (2000) have been criticized since their empirical result and their inferences were in part not coherent. For instance, Boix and Stokes (2003) and Wucherpfenning and Deutsch (2009) highlight that the scholars were able to find a linear relationship running from higher levels of economic development to democratic transition, albeit a marginal but still significant statistical effect[12]. Against this background, Przeworski´s et al. (2000) strong rejection of the endogenous democratization seems puzzling. Lastly, the results of the scholars could not confirm Lipset´s suggestion on economic growth as a destabilizing factor for democracy. On the contrary, Przeworski and Limongi (1997, p. 167) and Przeworski et al. (2000, p. 131) provided empirical evidence that economic growth increases the likelihood of persistence for democracies *and* dictatorships.

[12] See for a discussion of the empirical results Boix & Stokes (2003, pp. 522) and Wucherpfenning and Deutsch (2009, pp. 3). Indeed, empirical results of Przeworski et al. (2000, p. 124) presented a significant coefficient for the examination of endogenous democratization when they were controlling for economic factors and other relevant covariates. However, the presentation of the significance levels is not consistently conducted within their work that limits the validation of their result.

Although Przeworski et al. (2000) were not able to identify a threshold of economic development for a democratic transition, earlier contributions of Huntington (1968) and O´Donnell (1973) imputed likewise this assumption. Samuel Huntington (1968, p. 43) provided evidence for a "bell-shaped pattern of instability" for any kind of political regime. This pattern indicates that a certain level of economic development is crucial for a regime transition, since they are more likely to occur under political instability. He derived his assumption from existing cross-country analyses that have been based both on a comparison between a country´s national income level measured in GNP per capita[13] and violent conflicts and on a country´s literacy rate and stability. Both investigations provided evidence that countries with an intermediate level of income or literacy are more prone to instability than countries with a high or low income or literacy rate (Huntington, 1968, p. 43). Moreover, O´Donnell´s (1973, pp. 90, p. 114) classification of South American political regimes according to their level of modernization presented low and high income countries as non-democratic regimes. Countries within the intermediate range of income have been democracies (O´Donnell, 1973, p. 114). Results of both scholars rather suggest a *curvilinear* than a linear relationship between economic development and democratization. However, evidently, these inferences are premature, since they present a regional and timely bias. Other noteworthy contributions provided likewise empirical evidence for the linkage between economic development and democratic transitions. Londregan and Poole (1996) conducted a country fixed-effect model that controlled for the endogeneity of leadership change and regime type to examine whether income has a democratizing effect. Their sample covered 100 countries over the period 1952 until 1985 (pp. 13). Based on this sample, their results provided evidence that the previous level of per capita income using a logarithmic transformation had a significant but small democratizing effect. However, their results did not confirm a significant effect of economic growth on the level of democracy (Londregan & Poole, 1996, p. 15). Empirical outcomes of Burkhart and Lewis-Beck (1994) point in the same direction. By conducting a dynamic pooled time series model over a sample of 131 countries between 1972 and 1989, they found evidence that the level of economic development, measured by energy consumption per capita, fosters democracy. Finally, Helliwell (1994) conducted a log-linear model on a sample size of 125 countries between the period 1976 - 1985. He used average per capita real GDP as a measure for economic development and a dichotomous measure for democracy. His results confirmed a positive linear

[13] GNP per capita has been used as a measure since the concept of GDP per capita has been just established as the standard measure of economic welfare with the Bretton Woods Conference in 1944.

effect of the level of economic development on democracy (Helliwell, 1994, p.228). Moreover, he tested for a possible curvilinear relationship running from economic development to democracy, with negative results that questioned the economic development threshold imputed by Przeworski (2000 et al.). However, other past contributions provided by Jackman (1973), Bollen (1983), Bollen and Jackman (1985) indicated a curvilinear effect on democracy. These examinations were based on cross-sectional and not time-series analysis.

More recent empirical results likewise lend credence to Lipset´s modernization implication of an endogenous democratization. For instance, Epstein et al. (2006, p. 552) applied a trichotomous measure of democracy to examine the relationship between the level of economic development and democratic transitions. Their point of departure was the investigation of methodological flaws of Przeworski´s et al. (2000) work that gave rise to doubt the credibility and validity of the provided results[14]. By claiming that the dichotomous measure applied by the scholars was failing to identify partial democracies, Epstein et al. (2006) extented the democracy measure by using a trichotomous approach based on regime data provided by the Polity IV dataset. Their results relied on a panel sample including 169 countries for the period 1960 until 2000 (Epstein et al. 2006). Tobit and Markov analysis were conducted to test the democratizing effect of economic development. Indeed, the empirical examination of Epstein et al. (2006) confirmed that increased level of income per capita promotes democratic transitions. Hence, the scholars could not support the empirical results of Przeworski et al. (2000) and underlined the importance of partial democracies for the study of democratizations (Epstein et al. 2006, p. 567). Boix and Stokes (2003) provided as well empirical evidence that challenged the results of Przeworksi et al. (2000) and likewise confirmed the underlying modernization assumptions of Lipset (1959). Whereas Przeworski et al. (2000) denied a democratizing effect of the level of economic development by examining the post-war period, Boix and Stokes (2003, pp. 529) identified a significant relationship running from economic development to democratic transitions for the pre-war period and a marginal effect for the post-war period. Hence, they concluded that results from Przeworski et al. suffered from selection bias. They replicated the results of Przeworski and Limongi (1997) using an extented sample covering the overall period from 1850 until 1990 to undertake the examination for the pre-war period. According to their results, "[…] the impact of development on democratization exhibits diminishing returns." (Boix & Stokes, 2003, p. 531). Thus, economic development has a

[14] Epstein et al. (2006) replicated the empirical examination of Przeworski & Limongi (1997) and received different, but confirming results of the democratizing effect of economic development.

democratizing effect as a function of the already existing level of development. However, Boix and Stokes (2003) relativized their confirming findings of the prevalence of endogenous democratization by underlining that economic development just operates as an indirect proxy. From their point of view, the redistribution of income is the true mechanism that leads to a growing middle-class and fosters democratic transitions. Lastly, results of Kennedy (2010) give rise to doubt Przeworski´s criticism on the reliability of modernization theory. Their study aimed to emphasize the conceptual weaknesses on previous studies upon democratizing effects of economic development that did not take into account general *institutional changes*. Based on a panel analysis following different probit models and a fixed-effect estimations of 178 countries between 1816 and 2004, their empirical outcomes outline a substantial but conditional democratizing effect of economic development that is dependent on institutional changes within a country (Kennedy, 2010, p. 796). Although institutional changes are less likely to occur under rising levels of income, the probability of such a change towards democratic transitions are most likely. Albeit these results support modernization theory, the most recent criticism against the suggested democratizing effect of economic development has been developed by advocates of New Institutional Economics. For instance, Acemoglu et al. (2009; 2008) empirically demonstrated that whenever a fixed effect estimation is applied the imputed democratizing effect of economic development, as suggested by Przeworski and advocates, disappears. They conclude that rather time-invariant elements, like historical factors of countries are the true explanations for the endogenous democratization as already stated by earlier opponents of the theory (Acemolgu et al. 2009, p. 7, O´Donnell, 1973). However, these results have been controversially discussed in the empirical literature since recent contributions confirmed a significant democratizing effect of economic development even if applying fixed effect estimations following a different system GMM approach and controlling for different variables (see among others Heid, Langer & Larch, 2011; Faria, Montesinos-Yufa & Morales, 2014). The increased focus on fixed effect estimations, however, underlines that previous criticisms of methodological flaws upon this subject are taken more into consideration. Fixed effects estimations reduce the risk that detected relationships just account for the cross-section variation since they control for the within country effects. Precisely, this implies that the confirmation of a relationship between economic development and democratization could simply be driven by the fact that wealthier countries in the sample have been more democratic. However, this would have no implications for the variations over time within one country,

implying whether a country became more democratic with an increased level of income (for a detailed discussion see Robinson, 2006).

Besides the structural factors of economic development and economic growth that have been highlighted by modernization theory, the focus of recent contributions on determinants of democratization expanded and covers currently a broad variety of different factors. Noteworthy are studies that concentrated on the effects of social unrest and redistribution (Acemoglu & Robinson, 2001) and inequality (Acemoglu & Robinson, 2006; Boix, 2003; Haggard & Kaufman, 2012). Against the background of these contributions, transitions towards democracy are more likely under a low (Boix, 2003) or intermediate level of inequality (Acemoglu & Robinson, 2006). However, by applying a qualitative dataset Haggard and Kaufman (2012) find that distributional conflicts are less important for democratization than suggested by the previous studies. Likewise, the role of education for its own has been stressed as a promoting factor of democratic transitions. Whereas scholars like Acemoglu et al. (2005) do not find any significant effect if applying a fixed effect estimation, Edward Glaeser et al. (2004) confirms a democratizing effect of education that holds as well for political institutions. Furthermore, a growing literature pays more attention to the study of institutions and its underlying structural factors, than on qualitative outcomes like democratizations. Notably studies of Acemoglu and Robinson (2006) and Djankov et al. (2003) are located in this field. Lastly, the current debate about factors of democratization has not only expanded but also shifted its focus by paying an increased attention on the causal mechanisms between democracy and economic performance (Acemoglu et al. 2008; Burkhart and Lewis-Beck, 1994; Helliwell, 1994; Robinson, 2006;). While results of Burkhart and Lewis-Beck (1994, p. 117) and Helliwell (1994) indicated a causal relationship running from economic development towards democracy, rather than vice versa, Acemoglu et al. (2008) cannot confirm this unidirectional relationship by applying an Instrumental Variable approach. To the contrary, Acemoglu et al. (2014) provided evidence in an additional contribution that there is a causal relationship running from democracy to economic growth.

As presented, the relationship between the level of economic development and democratization is still disputed due to a lack of consistent empirical findings. These results can be traced back to the selection and operationalization of measures, like the choice of democracy measure and covariates, as well as to sample choice and methodologies that have been applied in the contributions (Paldam & Gundlach, 2008; Wucherpfennig & Deutsch, 2009). Especially methodologies vulnerable to the endogeneity problems are likely to generate different results

due to the reverse causality issue that is most conspicuous from economic growth to democracy. Furthermore, this chapter already presented briefly the suggested impact of economic growth on democratizations in terms of year-to-year changes in GDP. While some scholars emphasize the stabilization effect of economic growth for every kind of regime (Kennedy, 2010; Przeworski et al. 2000), others have emphasized its destabilizing effect (Huntington, 1968; O´Donnell, 1973; Olson, 1963).

Apart from these general contributions upon the relevance of economic development and economic growth for democratization, empirical and theoretical literature on Latin America that touches upon this subject shows no evidence for modernization theory (Diamond, Linz and Lipset, 1989; Mainwaring and Pérez-Liñán, 2002; 2005; O´Donnell, 1973). Economic development appears at most as a weak predictor for democratization in the region (Mainwaring and Pérez-Liñán, 2002; 2005). However, the variety of empirical studies with the focus on Latin America is very limited (Mainwaring & Hagopian, 2005; Haggard & Kaufman, 2016). To my best knowledge, contributions of Mainwaring and Pérez-Liñán (2002; 2005) account for the only quantitative studies in this field so far. Other relevant contributions with the focus on Latin America are based on more theoretical grounds like work from Diamond, Linz and Lipset (1989) or O´Donnell (1973). Mainwaring and Pérez-Liñán (2005) examine the potential causes of the regional democratic transition and durability using a trichotomous measure for democracy and conducting a Rare Event Logistic Regression (RELogit). Their empirical results challenge implications of modernization theory and Przeworski et al. (2000) since they find no evidence of a positive impact of the level of economic development on the post-1978 democratization in Latin America. The scholars identify rather political factors as the international and regional political environment, a decreased political polarization and a stronger commitment of political elites to democracy as major contributing elements of the democratic transition in Latin America in the 1980s (Mainwaring & Pérez-Liñán, 2005, p. 14). These results are in accordance with findings of Diamond and Linz (1989) based on a comparative historical analysis of ten Latin American countries covering the entire history of each country since its independence[15]. With respect to the underlying assumption of modernization theory, the scholars question the prevalence of the linear relationship between the level of economic development and democracy. The examination of the country cases point

[15] Linz, Diamond and Lipset (1989) provide a detailed theoretical and empirical examination in their compilation on Latin America on the countries: Argentina, Brazil, Chile, Uruguray, Venezuela, Colombia, Peru, Costa Rica, The Dominican Republic and Mexico.

rather at Przeworski et al. (2000) exogenous democratization approach, that the level of economic development does not initially trigger democratizations but promotes democracies whenever they are already in place (Linz & Diamond, 1989, p. 44). They highlight that in the case of Latin America "[…] the process of socioeconomic development generates social changes that can potentially facilitate democratization, but this depends on how political elites respond to them." (Linz & Diamond, 1989, p. 43) Their results identify rather economic growth as an important factor for democratization in the region (Diamond & Linz, 1989, pp. 43). Lastly, few scholars suggested that the predicted relationship between economic development and democratization by modernization theory represents rather a global pattern that is less valid for the specific region of Latin America (Mainwaring & Pérez-Liñán, 2002; O`Donnell, 1973). For instance, Mainwaring and Pérez-Liñán (2002) provided empirical evidence that large N-samples with a global country coverage present a stronger relationship between economic development and democratization as samples that are restricted to the region of Latin America. With respect to modernization theory, the scholars call their findings "Latin American exceptionalism", since Latin America presents many anomalies that do not follow the predicted democratization pattern of modernization theory (Mainwaring & Pérez-Liñán, 2002, pp. 16). According to their results, the weaker relationship for the Latin American region can be explained by two factors. First, the cross-sectional differences of poor and wealthy countries in global samples drive mostly the relationship between economic development and regime type. Secondly, the level of economic development has a comparatively weaker impact on the type of regime in Latin American. Although the scholars were able to detect an N-shaped relationship between economic development and democratization in the region, they could not verify the imputed linear relationship of modernization theory (Mainwaring & Pérez-Liñán, 2002, pp. 16). Furthermore, according to results of O`Donnell (1973, p. 93; p. 114) higher levels of modernization did not promote political democratization in Latin America. His investigation gave more support to the contrary case in which the most modernized countries in the region between 1960s and 1970s, Brazil and Argentina, represented "bureaucratic authoritarian" regimes[16]. From his point of view, modernization increases quickly political expectations and

[16] O´Donnell´s inference has been criticized by Przeworski & Limongi (1997, pp. 169-170), who stressed that the scholar´s results were biased since they were reliant among others on the case of Argentina which represents an outlier in Latin America with respect to is political system and level of economic development. The term "bureaucratic authoritarianism" was established by O´Donnell (1973, p. 95) and implies authoritarian political regimes that present a high level of modernization. He invented the term in distinction to other authoritarian regimes that present just a low level of modernization.

demands that cannot be fulfilled in the same timely fashion by changes in the social performance of a regime. O`Donnell calls this "developmental bottlenecks" that can foster the emergence of bureaucratic authoritarianism in the course of modernization (1973, p. 74).

Thus, although modernization theory has been largely confirmed (Bollen, 1983; Bollen & Jackman, 1989; Burkhart & Lewis-Beck, 1994; Epstein et al., 2006; Helliwell, 1994; Kennedy, 2010, p. 787; Londregan & Poole, 1996), in the light of contributions that focussed on Latin America these findings have to be questioned. However, empirical studies on the region are rare and the debate about the form and mechanism behind the potential relationship between economic development, economic growth and democracy remains not only on the global level, but as well on the regional level. Therefore, further empirical studies with the regional focus on Latin America are needed to investigate the driving factors of democratization in the region as this study aims to meet.

3 Economic and political developments in Latin America preceding the 1980s

The following section summarizes briefly the historical events in Latin America, focussing especially on the political and economic circumstances that have been relevant for the third wave of democratization that occurred in the post-1978 period[17]. Three remarkable developments took place that will be highlighted: 1. The second democratization wave in the aftermath of the great depression, 2. The rise of authoritarianism in the late 1960s and early 1970s and 3. the debt crisis in the region known as the lost decade starting in the 1980s that has been accompanied by the post-1978 democratization.

In general, Latin America appears as a world region that has been coined by a highly uneven and volatile political development, determined by many waves and reversals of democratization. Against this background, an investigation of Latin Americas political development offers a suitable point of departure to detect possible drivers of democratization. It is less surprising that the post-1978 democratization in Latin America was preceded by the

[17] As already mentioned, throughout this thesis, "third wave of democratization" will be used synonym to post-1978 democratization that is of interest in this study. To the contrary, "second wave of democratization" is associated with the democratic transition in Latin America during the 1940s and 1950s.

“second wave of democratization” in the region, to use Huntington´s words that took place between the 1940s and 1950s (Mainwaring & Pérez-Liñán, 2005, p. 90). However, this second wave of democratization already presented a reversal in the 1960s with a rise of authoritarianism (Huntington, 1991b, pp. 18). Different from the preceding democratic transitions in this region, the post-1978 democratization that is under consideration in this study has been most widespread and durable until now[18](Mainwaring & Hagopian, 2005; Remmer, 1992). The withdrawal from authoritarianism was most evident in the late 1970s and the beginning 1980s: Ecuador became democratic in 1979, followed by Peru in 1980, Bolivia in 1982, Argentina in 1983, Uruguay in 1984 and Brazil in 1985 - just to mention some of the democratic transitions in this region (Huntington, 1991b, p. 22). By the end of 1992, just two out of previous 20 Latin American countries remained under authoritarian rule, namely Cuba and Haiti[19] (Mainwaring & Hagopian, 2005, p. 2).

The democratization wave in the 1980s was preceded and accompanied by distinct economic upheavals. Let me begin with the great depression of the 1930´s that led to disturbances in the domestic economies of most Latin American countries. The economic structure of most Latin American countries was based on exports of primary goods, which made the region heavily rely on imports of industrialized goods. Thus, the pre-crisis economic strategy of most countries in the region was mainly based on an export-led growth approach. As a consequence of the great depression, international commodity prices declined and affected the value of Latin American exports to a large extent and contributed to balance of payments deficits in the countries of the region. This substantially hampered their financial ability of importing necessary goods to foster their industrialization. Learned from this experience, Latin America adopted import-substitution industrialization (ISI) in the aftermath of the 1930s that introduced a new economic era[20]. Protectionist policies as import tariffs were implemented to favour the domestic production and to prevent the region´s economies dependency of international markets (Boeninger, 1997, p. 29). Simultaneously, industrialization was state-led in which interventionist policies overtook a major role to shape the domestic economy (Bértola & Ocampo, 2012a, p. 138). Although these policies triggered economic growth in the countries in

[18] Despite its durability, marginal changes in the quality of democracy did take place in different countries of Latin America. See for instance Mainwaring & Pérez-Liñán, 2005.

[19] All 20 Latin American countries that have been referred to encompass: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela.

[20] Besides import-substitution industrialization, state-led industrialization or inward-looking development serve as well-known terms for these economic policies.

the immediate periods after the 1930s, their positive effect on the domestic economy receded already in the 1960s (Boeninger, 1997, p. 29). Besides these economic events, another striking development was the empowerment of the middle class in most Latin American countries in the period between the 1930s and 1960s. Paired with the second wave of democratization in the 1940s and 1950s, institutional reforms facilitated political and economic participation that increased the middle class´ political power. Most governments in the Latin American countries responded by beneficial policies for its citizens, like wage increases or public deficit spending (Boeninger, 1997, p. 29). Consequently, inflationary pressure increased and led in combination with stagnating growth rates to unfulfilled expectations of the ISI strategy. The resulting dissatisfying regime performance, contributed to a large political crisis in most of the Latin American countries in the 1970s that became apparent in a wave of authoritarianism. Only Costa Rica, Colombia and Venezuela appeared as the exceptional cases that remained democratic in the region in the 1970s (Boeninger, 1997, p. 29). In light of these events, the political transition from democratic to authoritarian rule resulted out of the economic circumstances Latin American countries faced between the 1930s and 1960s. According to Boeninger "The inferences to be drawn […] are clear: Economic stagnation fuelled social unrest, which fed political polarization and undermined the legitimacy of weak political systems that were simultaneously suffering ideological erosion." (1997, p. 31)

After the wave of authoritarianism in Latin America in the 1970s, the ISI strategy remained in most countries and has been partially combined with extensive export-led growth policies (Bértola & Ocampo, 2012b, p. 3; Boeninger, 1997, p. 31). Due to these policies, the region was able to achieve its highest growth rates in the 1960s and 1970s and marked the golden age of Latin American economic history (Bértola & Weber, 2015; Loayza & Fajnzylber, 2005, p.7). However, these policies led to growing external deficits since the demand for investments grew to keep up with the pace of industrialization. Due to a lack of national savings, most of the countries were reliant on alternative ways of funding. As a consequence, foreign borrowing became a widespread phenomenon. (Bértola & Ocampo, 2012b, pp. 3) The availability of foreign financing to Latin America was simultaneously facilitated due to the regions increased creditworthiness caused by their good economic performance of the post-1960s period. Additionally, the circumstance of the increased oil prices of the 1970s catalysed foreign borrowing possibilities as well. The large surpluses of oil exporters during that time, known as "petrodollars", were invested in Latin America that contributed to a boom-and-bust cycle of foreign financing (Bértola & Ocampo, 2012b, p. 6). Besides theses capital inflows, Latin

America was still facing trade and fiscal deficits. The steep rise of interest rates on the international markets in the late 1970s led to an external shock that hampered the fulfilment of the debt service for Latin American countries (Bértola & Ocampo, 2012b, p. 11). Deterred by these fiscal problems, cash inflows from foreign investors ceased. As a result, the region faced the most substantial debt crisis in the 1980s caused by Mexico´s default in 1982, known as the "lost decade" of Latin America´s economic development. Poverty and inequality rates increased and per capita GDP dropped by 8% and did not entirely recover until 1994 in the region (Bértola & Ocampo, 2012b, pp. 15). This event was attributed to the inherent volatility of international financing cycles as well as to the failure of state-led industrialization (Bértola & Ocampo, 2012b, p. 13). Multilateral development institutions like the IMF became important actors in the aftermath of the crisis that provided conditional loans to the countries of the region (Moreno-Brid, Pérez Caldentey & Ruiz Nápoles, 2004). These capital inflows were needed to reduce the debt burden and to prevent a further escalation of the crisis on the international level. However, the access to these loans were conditioned on macro-adjustments and structural reforms that implied claims for deregulation and privatization signed by a distinct neoliberal approach. These policies were associated as effective instruments to recover the domestic economies. Finally, the intervention of the Bretton-Woods institutions and their policy implications coined the era of the "Washington Consensus" in the 1980s that led to a shift in the country´s industrialization strategy from import-substitution towards export-orientation. Already before the onset of the economic crisis, countries of the region started to democratize in the late 1970s as presented at the beginning of this section. This was the initial starting point of the third wave of democratization in Latin America that was coupled with the decline of communism in the world by the fall of the Soviet Union. The withdrawal from authoritarianism and the emergence of the third wave of democratization in the region cannot be attributed in the same distinct manner to the economic contexts of the pre-1980s, as it was the case with the emergence of these authoritarian regimes in the 1960s and 1970s. However, without any doubt, the economic circumstances increased the political pressure on military dictatorships to foster economic performance that weakened their performance legitimacy (Boeninger, 1997, pp. 32). Lastly, the political and economic history presented a linkage between the economic and political developments within the region. However, Latin America appears to have followed a contrary path as modernization theory would have predicted - while it seems that economic growth was fostering authoritarianism in the region, economic crisis appeared to be more favourable for the emergence of democracies. A striking feature remains: despite the emergence

of the worst economic crisis the Latin American region has faced in its history in the 1980s, the new democracies in the region were able to survive.

4 Data

This chapter provides an overview of the Polity IV index and the Maddison Project database that served as the main data sources of this empirical investigation. Particular attention have been payed to the presentation of the dataset´s scientific criteria of reliability, representativeness and validity. Furthermore, the section briefly presents some descriptive statistics about the independent variable and the main explanatory variables that are of relevance for the empirical investigation. Lastly, the selection of control variables will be briefly introduced.

4.1 Polity IV Dataset

The Polity IV dataset is one of the most commonly and comprehensive democracy schemes used in comparative politics related empirical research (Acemoglu et al. 2009; Coppedge et al., 2011, 2015; Epstein et al. 2006; Glaeser et al. 2004; Londregan & Poole, 1996; Mainwaring, Banks & Pérez-Liñán, 2001, 2005; Munck & Verkuilen, 2002; Kennedy, 2010). Thus, it is highly suitable for the kind of time series analysis that has been conducted in this study. In general, the dataset measures various aspects of regime type according to the prevalence or absence of *institutional characteristics*. These institutional characteristics are presented by the polity of a nation state that serve as the unit of analysis in this dataset. In this logic, Polity IV provides information about two aggregated indexes, one of autocracy (AUTOC) and one of democracy (DEMOC). The dataset contains regime authority characteristics of currently 167 countries over a period from 1800 until 2015 (Center for Systemic Peace, 2016)[21]. Countries that are covered by the Polity IV dataset had to outline a population of at least five hundred thousand in 2006 (Marshall, Gurr & Jaggers, 2016, p. 4). By a yearly assessment, the estimates of autocracy and democracy are derived from country specific characteristics regarding six different polity measures. These include ”Regulation of Chief Executive Recruitment”,

[21] Or from a countries independence until 2015.

”Competitiveness of Executive Recruitment”, ”Openness of Executive Recruitment”, ”Executive Constraints”, ”Regulation of Participation” and lastly ”The competitiveness of participation” (Marshall, Gurr & Jaggers, 2016, pp. 20)[22]. In accordance with a distinct weighting system, the operational indicators of democracy and autocracy are presenting the aggregate values of the polity measures[23]. Since the dataset is based on the assumption that political regimes are able to present autocratic and democratic characteristics at the same time, both authority features are not treated as contrasts in absolute terms. Following this logic, each country outlines a numerical value regarding its autocratic and democratic characteristics that are not outlining alternatives within the authority spectrum. However, the dataset provides as well two combined variables, which present a single regime score that is derived from the respective estimates of autocracy and democracy by subtracting the autocracy levels from the democracy levels (Marshall, Gurr & Jaggers, 2016, p. 16). This builds the base for the Polity and Polity2 variables whereby only the latter will be at the centre of this empirical examination since it serves as the source of the binary democracy measure developed for this study and hence presents an important unit of analysis. On the contrary to the original unified Polity variable, the advanced Polity2 variable has been revised from the original Polity score by adjusting its estimates for the utilization of a time series analysis. In this logic, standardized authority scores of -66, -77 and -88 that would not fit in the range of 10 to -10 have been converted to the applied score (see for more details of the operationalization Marshall, Gurr & Jaggers, 2016, p. 17)[24]. Thus, the Polity2 variable covers the level of democracy within the respective country by outlining a 20-point scale ranging from full democracy (10) to full autocracy (-10) and hence represents an censored variable following a continuous scale. The introduction of this Polity2 variable outlines the strength of this dataset that clearly lies in the utilization of a continuous scale, instead of using a dichotomous, trichotomous or other categorical measure as it has been applied for other democracy indices (cf. Alvarez et al. 1996, Przeworski et al., 2000; Epstein et al. 2006; Mainwaring, Brinks & Pèrez-Liñán, 2001; Gasiorowski, 1996). Nonetheless, the utilization of a unified autocracy and democracy score in

[22] For a detailed description of the composition and generation of the six component variables, see as well Marshall, Gurr & Jaggers, 2016, pp. 14.

[23] For a detailed description of the derivation of the operational indicators, democracy and autocracy, see as well Marshall, Gurr & Jaggers, 2016, pp. 14-15; 15-16.

[24] Standardized authority scores in the Polity IV dataset: -66 equals Interruption Periods, -77 equals Interregnum Periods and -88 equals Transition. General conversion rules for the Polity2 score have been the following: -66 cases have been treated as “system missing”, -77 cases have been converted to a neutral Polity score of “0” and -88 have been prorated across the span of the transition (Marshall, Gurr & Jaggers, 2016, p. 17).

terms of the Polity and Polity2 variables outlines one drawback that can generate misleading interpretations. Due to the subtracting mechanism behind the generation of the respective Polity and Polity2 variable, different combinations of democracy and autocracy characteristics can lead to the same Polity score. Thus, the respective Polity score embezzles the initial authority distribution of each country and treats democratic and autocratic characteristics as alternatives. This can lead to contradicting results to the original theory and should be taken into consideration if working with the unified variables (Marshall, Gurr & Jaggers, 2016, p. 17). Apart from this shortcoming, Polity IV serves as an appropriate source for the longitude empirical study since it covers a large period that contains the crucial times before and after the democratization process in Latin America[25].

After this brief presentation of the dataset itself, Polity IV is examined according to its scientific characteristics of reliability, representativeness and validity to evaluate its suitability for this empirical study. With respect to the reliability character of the underlying dataset, Marshall, Gurr and Jaggers (2016, p. 5) emphasize the absence of reliability problems due to the small number of researchers that have been undertaken the coding. This facilitates the common understanding of the operationalization techniques underlying the Polity IV dataset. Since 2000, an inter-coder reliability examination is part of the coding procedure as well (Marshall, Gurr & Jaggers, 2016, p. 6). This gives rise to assume that the Polity IV dataset does not outline serious shortcomings regarding its consistency. However, Bowman, Lehouq and Mahoney (2005) question the assessment of some country regimes in the Polity IV dataset and criticise the respective aggregation of regime scores. For instance, they highlight the case of Costa Rica that outlines according to the Polity IV dataset a full democracy between the period of 1900 and 1999 although the country was facing several coups between 1900 and 1955. Others stress the failure of Polity IV to capture universal suffrage to assess the polity level of a country. According to Paxton (2000) this can lead to an overestimation of the level of democracy for countries like Switzerland that received the highest polity score between 1950 and 1979 despite the absence of women suffrage until 1971. Hence, both examples outline that the Polity IV dataset generates in some cases ambiguous results. However, this is rather a product of the underlying definition of democracy. Thus, this suggest rather shortcomings regarding the representativeness character of the Polity2 variable, than its reliability character. Nonetheless,

[25] Exceptions for the temporal provision of polity measures have to be made for the country cases Jamaica and Trinidad & Tobago, since Polity IV is covering the period 1959 - 2015 for the case of Jamaica and the period 1962 - 2015 that leads to a reduction of the sample size in few cases.

the measurement of democracy is complex and no consensus has been reached so far about the essential elements to operationalize democracy in an adequate manner as the variety of discussions about different measurements and conceptualizations of democracy outline (cf. among others for discussion Casper & Tufis, 2003; Coppedge et al. 2015; Munck & Verkuilen, 2002; Bowman, Lehoucq & Mahoney, 2005). Hence, the conceptualization of democracy through indexes is likely to be vulnerable for criticism and is not per se a drawback of a specific dataset. Another general weakness of the dataset is the potential prevalence of biased original sources that indicate a lack of accuracy or incompleteness (Marshall, Gurr & Jaggers, 2016). Such errors in the primary sources can lead to misleading coding results limiting the reliability and validity of the dataset´s provided information. However, this weakness affects all databases that rely on past sources and does not outline a specific shortcoming of the Polity IV dataset itself.

Lastly, results of Bowman, Lehouq and Mahoney (2005) give rise to doubt the overall credibility of democracy indexes, including the Polity IV index, according to their estimates for Latin American countries. They investigated that despite a high overall score correlation between democracy indices, they differ with respect to Central American countries[26]. As an explanation, the scholars underline the difficulty to classify Central American countries as either democratic or autocratic in comparison to European or South East Asian countries. This underlines the lack of consensus regarding the regime interpretation of Latin American countries that generates varying regime results for different democracy indexes. This criticism finds support by other scholars as well. In a more general manner, Coppedge et al. (2015, pp. 19) and Hadenius (2005, p. 4) underline that the congruence between Polity IV and other democracy indexes diminish with respect to intermediate or ambiguous country cases. To the contrary, index results are likely to present high correlations in extreme country cases (Coppedge et al. 2015, pp. 19; Hadenius, 2005, p.4-6). This outlines a serious bias of the dataset, since most of the Latin American countries (apart from the case of Costa Rica) rather outline ambiguous regime cases, than extreme ones. Moreover, Epstein et al. (2006) and Hadenius (2005) proofed through their empirical results that the choice of democracy measure alter inferences regarding the empirical investigations. Against this background, the selection of a respective democracy index can indeed play a crucial role for the expected outcome. However,

[26]Albeit these findings, it has to be highlighted that the scholar´s results are just relying on an examination of five Central American countries: Nicaragua, Costa Rica, Honduras, Guatemala and El Salvador (Bowman, Lehouq and Mahoney, 2005). This limits the validity of their findings for other countries than the one´s mentioned.

these problems affect the examination to a smaller extent, since most of the democracy indexes would face the same structural problem of producing less reliable results due to classification errors or operationalization properties. Thus, choosing a different democracy index could not solve these issues in a sufficient manner and have to be taken into consideration as limitations of the interpretation of the empirical results.

Besides these rather structural weaknesses of the dataset, Polity IV is outlining limitations regarding its underlying restriction. As mentioned earlier, the dataset just contains countries that present at least a total population number of 500.000. This generates missing estimates for the small countries and hence outlines a certain incompleteness. Nonetheless, this affects the comprehensiveness of the examination just slightly. Since this study is just looking at countries of Latin America, no assertions can be made upon the French Antilles Guadeloupe, Martinique, French Guiana, Saint Martin and Saint-Barthélemy. Apart from these mentioned countries, Polity IV does not provide any data for Puerto Rico as well, despite a sufficient high number of population. Against this background, Polity IV delivers polity data for 22 Latin American countries. However, the empirical examination is restricted to only 20 Latin American countries due to the limited data availability of covariates[27].

Apart from the mentioned weaknesses of the Polity IV database, it fits the research purpose well by outlining the following four characteristical strengths: Firstly, it is one of the most established and commonly used democracy indexes and hence appears as a representative standard measure for democracy within political science related fields. This feature assures the comparability of the results of this examination with other findings upon this subject. Secondly, Polity IV convinces by its temporal coverage covering the crucial time period before and after the 1980s. Other democracy indexes that likewise provide a continuous measure, like Freedom House, are lacking an extensive time span and are less suitable for an examination like this (cf. Freedom House, 2016). Thirdly, Polity IV is adequate to measure the democratization in Latin America since it is capturing the gradual shift between democratic and autocratic characteristics of a country. At this point, the continuous measurement of democracy by applying a graded scale in terms of its Polity2 indicator allows a deeper understanding of the relationship between the chosen economic performance variables and democracy, than dichotomous or trichotomous

[27] These include: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela. The countries Jamaica and Trinidad & Tobago have been thoroughly excluded from the sample due to a missing data availability of covariates for these cross-sections.

measurements as applied by Przeworski (1996) or Epstein et al. (2006). By applying a continuous scale "borderline" cases can be identified that does not require an absolute regime categorization of a country as either democratic or not (Bollen & Jackman, 1989, p. 612). Besides, marginal differences between countries in their democratic or autocratic characteristics can be detected more easily by following the continuous concept of the Polity IV dataset. Furthermore, Polity IV has been preferred against other continuous measurements of democracy indexes as provided by the Economist Intelligence Unit (EIU) (2017) due to its common usage in political science. However, a continuous measurement of democracy can be as well misleading since no clear distinction between democracies and non-democracies can be made (for a more detailed examination on the adequacy of democracy measurements see Collier & Adcock, 1999). Nonetheless, this disadvantage can be disregarded since the purpose of this examination is to measure the *incremental change of democratic levels*, than to examine a regime change. Lastly and despite the marginal differences mentioned earlier in the section Polity IV outlines in general a great concordance with other democracy indexes resulting in highly correlated outcomes (Bowman, Lehouq & Mahoney, 2005; Hadenius, 2005[28]). This reduces the risk of index-induced biases of empirical outcomes. Hadenius (2005) even concludes after an examination of different democracy indexes that the Polity IV index, besides Freedom House Index, is most likely to produce valid results. Polity IV presents a methodological advantage by applying a graded scale and outlining a precise data collection procedure that increases the dataset´s validity and reliability (Hadenius 2005, p. 35). Against this background, the selection of Polity IV instead of an alternative index is not likely to generate ambiguous results. Thus and despite its weaknesses, the Polity IV dataset serves as an appropriate source for this examination.

The provided democracy measure, Polity2, serves not only as the source for the dependent variable, but has been utilized as an autoregressive component in the empirical model by employing lagged values. Since this study aims to examine the gradual increases of the respective democracy levels of a country, the Polity2 variable has been operationalized as a dichotomous measure, henceforth named as democratization. Whenever, a country´s Polity2 score increased from the past to the current year, the dummy variable is coded with a 1 that captures the democratization for each country over the studied period. Vice versa, whenever a country´s Polity2 score remains unchanged or drops between two consecutive years, the dummy

[28] The examination of Hadenius (2005) just focussed on the democracy variable provided by the Polity IV dataset, and did not analyse the dataset with respect to its Polity2 variable.

variable has been coded 0. Against the background that democratization present a comparatively rare event, just 74 cases have been coded with a 1 out of a total number of 680 cases of the variable. The 680 cases equal the multiplied number of 20 cross-section observations over 33 years of observation. Table 4.1 depicts this circumstance:

Table 4.1: Operationalization of the dependent variable democratization - 1975 - 2008

democratization	**Frequency**	**Percent**
0	606	89.12
1	74	10.88
Total	680	100.00

Using a binary measure as dependent variable to identify a possible effect of economic development and economic growth stands in line with the relevant literature and has been already highlighted in this chapter. However, the derivation of this binary measure from the polychotomous Polity2 variable enables an examination of the gradual change of the level of democracy. Thus, only relative increases in the democracy level of consecutive years will be measured that do not imply necessarily regime changes. This aspect adds value to this procedure, since it has not been applied in the relevant literature like this and may shed more light in the democratizing effect.

After the analysis of the Polity IV dataset for its suitability of this study, additional descriptive statistics on Latin America are provided with respect to the Polity2 and the democratization indicator. These can give first insights on the democratization development in Latin America.

Table 4.2 Summary of the Polity2 and democratization variable - 1975 - 2008 for 20 Latin American countries

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**	**N**
Polity2	3.66	6.37	-10	10	680
Democratization	.10	.311	0	1	680

The summary table 4.2 of the inspected variables lists 680 observations that encompasses a yearly Polity2 and democratization score from 1975 to 2008 for each of the 20 Latin American countries of the survey. A closer look on the distribution of the variables across the Latin American countries indicates that the average political regime in Latin America tends rather to

be democratic, than autocratic. By outlining a mean of 3.66 the distribution of the Polity2 characteristics within the range of -10 to 10 is slightly skewed to the upper end. Besides, the standard deviation of 6.37 presents an intermediate variability of the values of the variable. The binary measure of democratization presents a mean value of 0.10 and a comparatively small standard deviation that indicates again gradual increases of the level of democracy between two consecutive years as a rare event. This can be ascribed to the circumstance that a consolidation or decrease of the democracy level outweighs that equals the category 0 of the binary measure.

A further visual investigation of the timely development of the average value of the Polity2 variable across the 20 Latin American countries between 1950 and 2015 confirms in an evident manner the highly volatile political development in the region as presented in section 3[29]. Clearly, figure 4.1 indicates a first expansion of the democracy levels in the late 1950´s and early 1960´s, referred to as the "second wave of democratization" in the earlier chapter that ended with the rise of authoritarianism by the 1970´s. Finally, the illustration presents a distinct increase of the average value of Polity2 across the 20 Latin American countries around 1975. Thus, these first ocular inspections of the data drawn from the Polity IV index confirm the existence of the democratization wave in Latin America in the 1980s as presented in section 3. Furthermore, the decreasing range of the confidence intervals by the 1990´s point out that the variability between the respective cross-sections of the sample declined over time with respect to the level of democracy. To the contrary, the preceding political waves outline a broader variety between the cross-sections that indicate the prevalence of more heterogeneous regime characteristics in the countries.

[29] For the visualisation of the Polity2 and democratization development a larger temporal coverage has been used than utilized in the empirical sample due to a more appropriate illustration of the political history of the region.

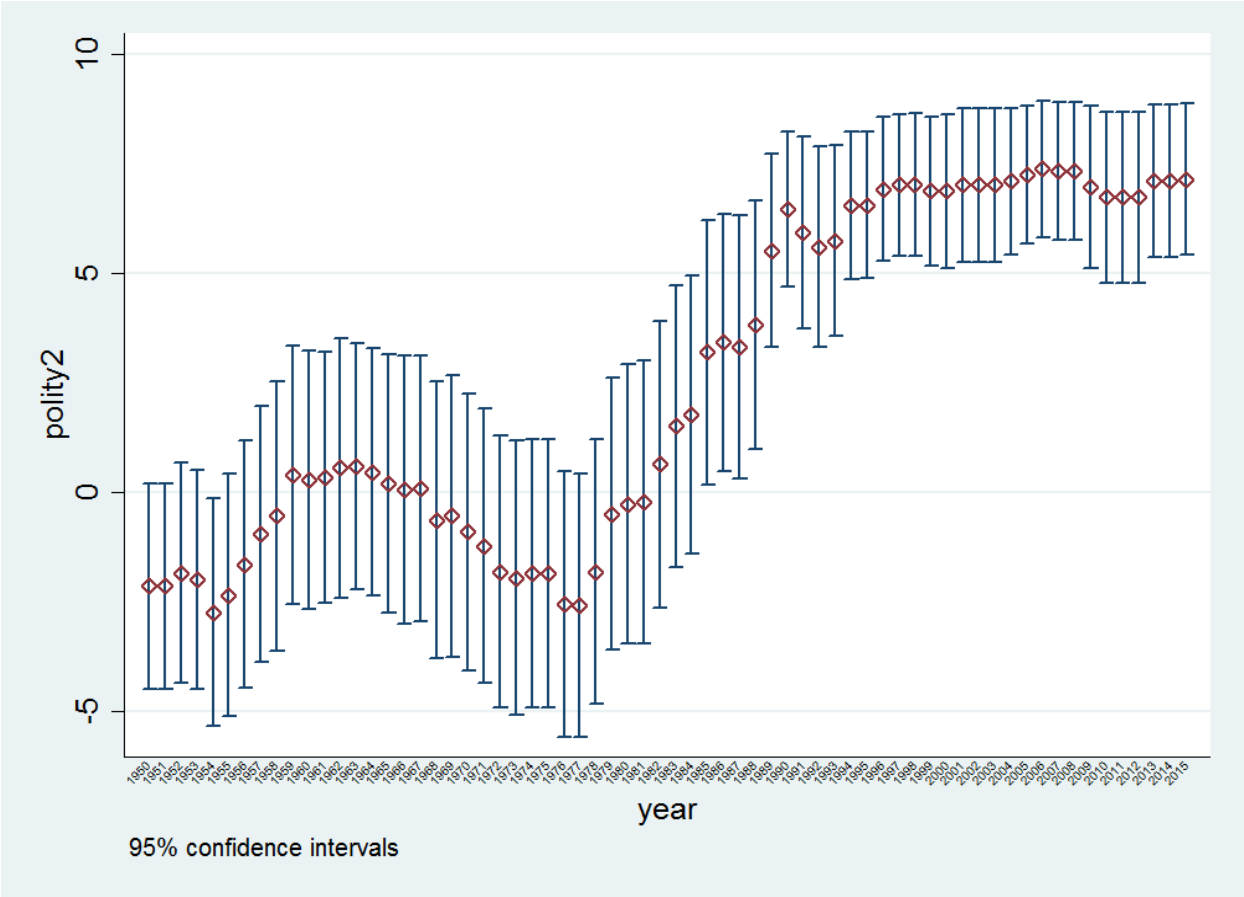

Figure 4.1: Average Polity2 development with confidence interval across 20 Latin American countries - 1950 - 2015 (adapted from Center for Systemic Peace, 2016)

Lastly, it is worthwhile of having a closer look on the timely development of the binary measure democratization that is presented in figure 4.2, since this variable does only capture the gradual increase of the level of democracy over time. This illustration depicts clearly, that in the period under consideration (1975-2008) a rise of gradual increases in the democracy levels across the 20 Latin American countries occurred that lasted until the beginning of the 1990´s. Hence, the visualisation of the binary measure demonstrates as well a wave of democratization that has been indicated by the political development of the region. Due to spatial limitations, a detailed visualisation of the democracy development within the respective cross-sections can be deduced from figure 8.1 and 8.2 in the appendix A.

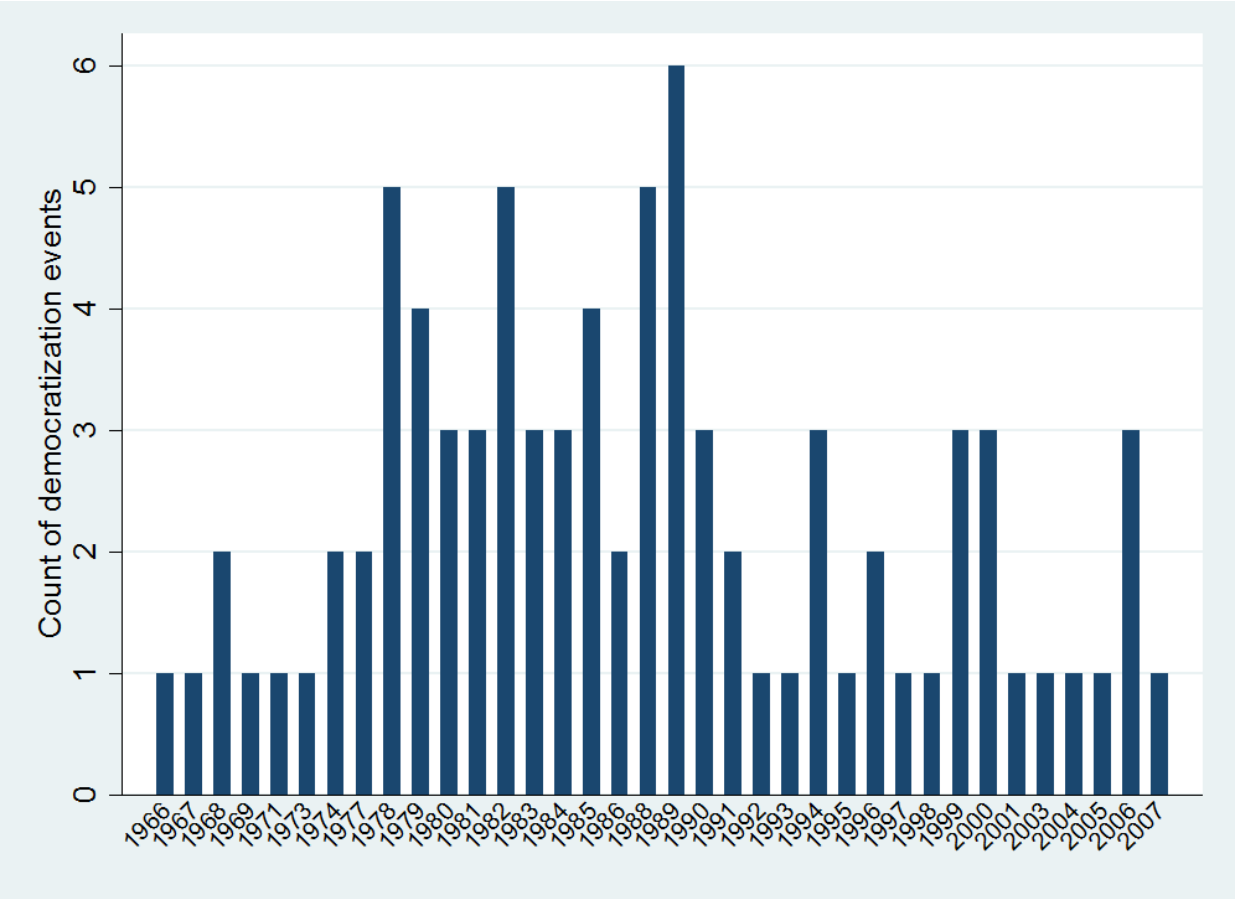

Figure 4.2: Frequencies of democratization events within the period of 1966-2008; years 1970, 1972, 1975, 1976, 1987, 2002 and 2008 are missing due to absent democratization in these periods (adapted from Center for Systemic Peace, 2016)

4.2 Maddison Project Database

To measure economic development the average level of GDP per capita in real values of the respective Latin American countries serves as a proxy. This measure has been consistently utilized as a proxy in the relevant literature (Acemolgu et al. 2007; Lipset, 1959; Przeworski & Limongi, 1997; PACL; 2000; Mainwaring & Pérez-Liñán, 2005; Kennedy, 2010). Moreover, GDP per capita instead of total GDP has been used in this study, since the first measure is already controlling for the population size of a country. This is an important feature that enables a better comparison between the cross-sections with respect to this measure. Lastly, the measure of GDP per capita *in levels* has been used to test the prevalence of a linear relationship, while the *logged values* of the measure have been utilized to test for a curvilinear relationship. In accordance with the usual procedure in the literature, the measure for economic growth has

been operationalized as year-to-year change of the log levels of GDP per capita by using first differences of the logarithmic values. The indicator of GDP per capita is suitable for the purpose of this study because it provides important information about the living standards of a population. On the one hand, GDP measures the individual's well-being in terms of the ability to produce a higher share of goods and services within a certain period. On the other hand, it presents as well a measurement for the potential consumption share of these products. Lastly, GDP captures implicitly the individual´s consumption ability of non-material standards of living like education or health that is of special relevance for this survey. (Bolt, Timmer & van Zanden, 2014) Apart from these advantages, it is noteworthy to highlight the drawback of the utilization of GDP per capita as a proxy of living standards that raises concerns of its reliability. Concerns on this issue tackle especially the aspect of the distribution of living standards across populations that are not represented by the measurement of GDP per capita in aggregated terms. Average high GDP levels could lead to the misleading perception of overall high living standards within a population disregarding an unequal distribution of household incomes. For instance, Stiglitz, Sen and Fitoussi (2009) elaborate on this issue in their commission report and underline the limitations of GDP as a measurement for economic performance. Among others, they claim the extension of the standardized average indicators to measure income and consumption by including indicators that give information on the distribution of these measurements. Although the measurement of living standards using levels of GDP are subject of diverse shortcomings, it presents advantages due to its cross-country accessibility and timely availability. Alternative indicators, like the Human Development Index (HDI), are mostly lacking one of the two mentioned features. Against this background, GDP per capita is used as a representative measurement for economic development and economic growth in this study. However, the utilization of this indicator in comparative empirical research leads to further weaknesses that are noteworthy. First, GDP is measured in national currencies that hampers cross-country comparisons of this measurement and can cause several issues. Bolt, Timmer and van Zanden (2014) highlight the issue of the correlation between prices and economic development that can lead to an overestimation of incomes in developed countries. To avoid this problem in comparatives studies, GDP per capita has to be measured in a common currency that takes into account the Purchasing Power Parity (PPP) of each country. A dataset that addresses this issue has been the Maddison Project that will serve as the source for GDP per capita in this survey (The Maddison-Project, 2013). Measurements of GDP per capita are accounted in international prices using International Dollars (ID) that are presenting the average

prices for goods and services across countries using the purchasing power of each country in 1990 as the calculation base (Bolt, Timmer & van Zanden, 2014, p. 59). Furthermore, the Maddison Project database provides GDP per capita in real average values per year (The Maddison-Project, 2013).

The Maddison Project dataset has been initiated in 2010 and relies on previous research of Angus Maddison who collected national account estimates to measure economic performance throughout history. The revised Maddison Project database uses new estimates that have been made available through the latest research and have been summarized by Bolt and van Zanden (2014). For instance, new data of various regions of Latin America are now covered by the revised dataset and this assures a more comprehensible picture of real GDP and real GDP per capita estimates[30]. A distinct advantage of this dataset is its wide provision of GDP estimates of the respective Latin American countries, covering a period of at least 1950 - 2010. To the contrary, similar indicators provided through the World Development Index (WDI) would just contain estimates for the period from 1980 - 2010. Hence, such estimators would not have been adequate for the purpose of this study, since the impact of economic development and economic growth on Latin America´s political development before 1980 is of interest in this survey.

Although the dataset is highly suitable for this study with respect to the covered period, it outlines some general limitations and some limitations with special concern of Latin American countries. Let me briefly outline the general weaknesses of the Maddison Project dataset that have to be taken into consideration for the following study. As stated earlier, the Maddison Project aimed to provide comparable GDP estimates across countries by using international prices. Although the dataset fulfils this purpose and presents estimates that are suitable for comparative empirical studies, the underlying calculation mechanism of these estimates leads to new issues. To assure the provision of historical GDP estimates in a common currency the Maddison Project computes the respective GDP per capita series by applying extrapolation techniques based on volume growth rates of GDP (Bolt, Timmer & van Zanden, 2014, p. 62). Therefore, estimates are calculated in accordance to constant prices of 1990 by using the respective Purchasing Power Parity (PPP) of each country of this benchmark year (Bolt, Timmer & van Zanden, 2014, p. 62). However, since GDP estimates follow the fixed price structure of the underlying benchmark year they do not present the change in PPP for each

[30] Whenever this survey is referring to GDP it implies real GDP estimates.

country throughout the history. Thus, comparisons of GDP estimates between countries are likely to be biased the further these estimates are away from the benchmark year of 1990 (Bolt, Timmer & van Zanden, 2014, p. 62). Furthermore, the comparison of GDP levels across countries is determined by the chosen base year for the PPP conversion and thus differences of these levels are highly sensitive to this year (OECD, 2005, p. 29). Against this background, especially estimates for Latin America that are covering estimates further away from 1990 are less likely to correspond to the set price structure. Hence, GDP estimates based on constant prices of 1990 can lead to a misleading picture of income, consumption and investment that distinctly diverge from past and current national accounts. The use of the recent available PPP adjusted GDP estimates of the year 2005 in the Maddison Project database would assure a more consistent picture of current price structures, taking into account the recent GDP growth rates of emerging economies. However, since the results of the PPP 2005 estimation presents some issues the dataset still relies on the PPPs of 1990 (Bolt & van Zanden, 2014, p. 639). Furthermore, James et al. (2012, p. 2) highlight that the Maddison Project bases on national account data from 2010 and do not include the most recent available estimates. This weakness of the Maddison project dataset affects indeed the availability of the required data on Latin American countries, since not all Latin American countries outline even GDP estimates until 2010. For instance, the Maddison Project just provides data for Cuba, Haiti, Honduras, Nicaragua, Panama, Paraguay and El Salvador until 2008. Hence, this reduces the overall number of years that can be surveyed in this study.

Lastly, a general limitation of all databases is the provision of reliable and valid data estimates covering the distant past. However, this limitation is less relevant for this examination, since it focusses on a more recent period covering 1975 until 2008. According to Clio Infra and Bolt, Timmer and van Zanden (2014, p. 62) GDP estimates of Latin America encompassing 1950 until 2000 have been classified with the best data quality. Data that has been classified with the best quality include official GDP numbers, which have been derived from national statistical offices or international agencies (Bolt & van Zanden, 2014, p. 629). Although national statistical offices deliver in general reliable data, their representativeness has to be treated with caution since statistical offices rely on official estimates. This holds especially for developing or emerging economies, where household production or consumption structures cannot be captured in an adequate way since a large part of the economic activity is located in the informal sectors. According to the ILO (2013), informal employment in the informal sector ranges in Latin America between 24.3 and 58.3 per cent. Against this background, estimates

provided by the dataset for Latin America cannot be used without substantial limitations and concerns, since these caveats have to be taken into consideration.

To provide a brief overview about the development of GDP per capita and economic growth in Latin America within the period under consideration some descriptive statistics are presented in the following. Summary table 4.3 depicts that the measures of GDP per capita, logged GDP per capita and economic growth contain 680 numbers of observations covering the period 1975 until 2008 for the respective 20 Latin American countries. The mean of GDP per capita of 4,469.56 international Dollars at constant prices of 1990 indicates in comparison to its minimum and maximum values that the level of economic development varies on an intermediate level across countries and time. Since most of the Latin American countries range in the middle-income level, this is less surprising. Similar conclusions can be derived from the visual inspection of the two remaining economic variables that outline likewise moderate standard deviation in comparison to its mean values. However, most striking is the low average level of economic growth throughout the sample period and across countries that indicates the economic stagnation phase in Latin America after the economic crisis in the 1980s.

Table 4.3 Summary of GDP per capita 1990 int. $, logged GDP per capita and economic growth for LAC of the period 1975 - 2008

Variable	Mean	Std. Dev.	Min	Max	N
GDP per capita	4,469.56	2,423.49	672.42	13,479.08	680
Logged GDP per capita	8.24	.59	6.51	9.50	680
Economic Growth	.01	.04	-.33	.23	680

Having a closer look on the temporal development of economic development within the region, figure 4.3 demonstrates that the average level of logged GDP per capita increased in the Latin American countries since 1950 with a slight decline in 1980 that marks as well the lost decade of region as presented in section 3[31]. However, after the 1980s GDP per capita continued to grow. The development of the confidence intervals indicate that the variance of different levels of economic development across countries expanded with proceeding time. A detailed visualization on the GDP per capita development for each Latin American country can be withdrawn from the appendix A, figure 8.3.

[31] A larger period has been chosen for the illustration as it has been used in the empirical sample to provide a comprehensive picture of the economic development process in Latin America.

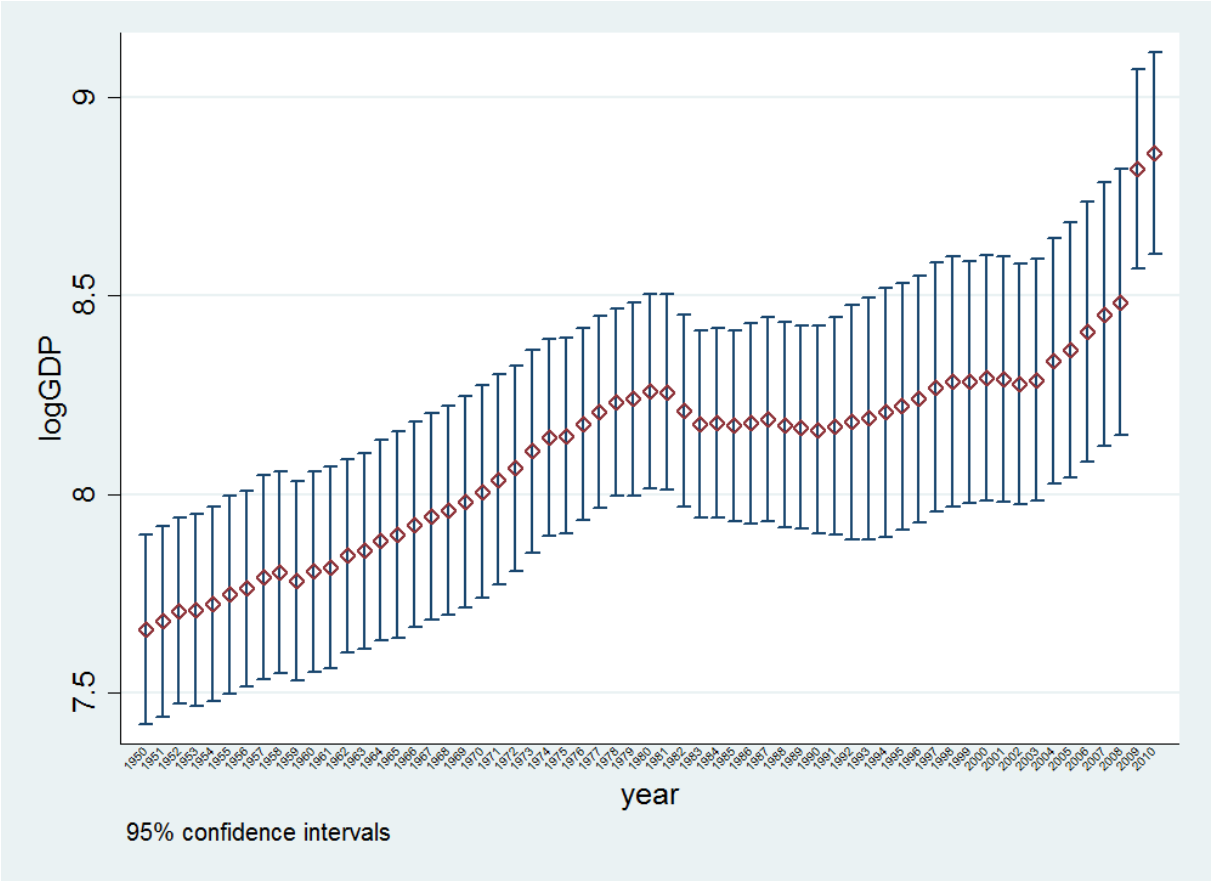

Figure 4.3 Average GDP per capita development between 1950 and 2010 in Latin America (adapted from Maddison Project Database, 2013)

Figure 4.4 presents the timely development of the average economic growth rates in LAC that indicates likewise the boom-and-bust cycle of the region as presented in section 3. This phase was coined by the highest growth rates in the late 1960s and beginning 1970s. Clearly, growth rates dropped sharply in the aftermath of Latin Americas lost decade that reached the nadir in 1982 with the Mexican default. Moreover, growth rates have been highly volatile in the period under consideration in this study that covers the period 1975 - 2008. After the economic crisis in the 1980s, growth rates started to stabilize slightly in the 1990´s. However, it took nearly 20 years until the short-term economic performance of LAC reached the same level as before the economic crisis in the 1980s. The cross-sectional variation between the respective Latin American countries with respect to their growth rates reached the highest points on the brink of the beginning economic crisis in the 1980s and in the aftermath of the 1990s, as indicated by the confidence intervals. This points at an unequal growth performance especially before and after the crisis due to the fact that some Latin American countries performed already better

before the crisis and were able to recover quicker than others from the lost decade. Most striking is the assimilation of growth variations within the 1980s that indicates that all Latin American economies suffered to a similar extent under the consequences of the crisis.

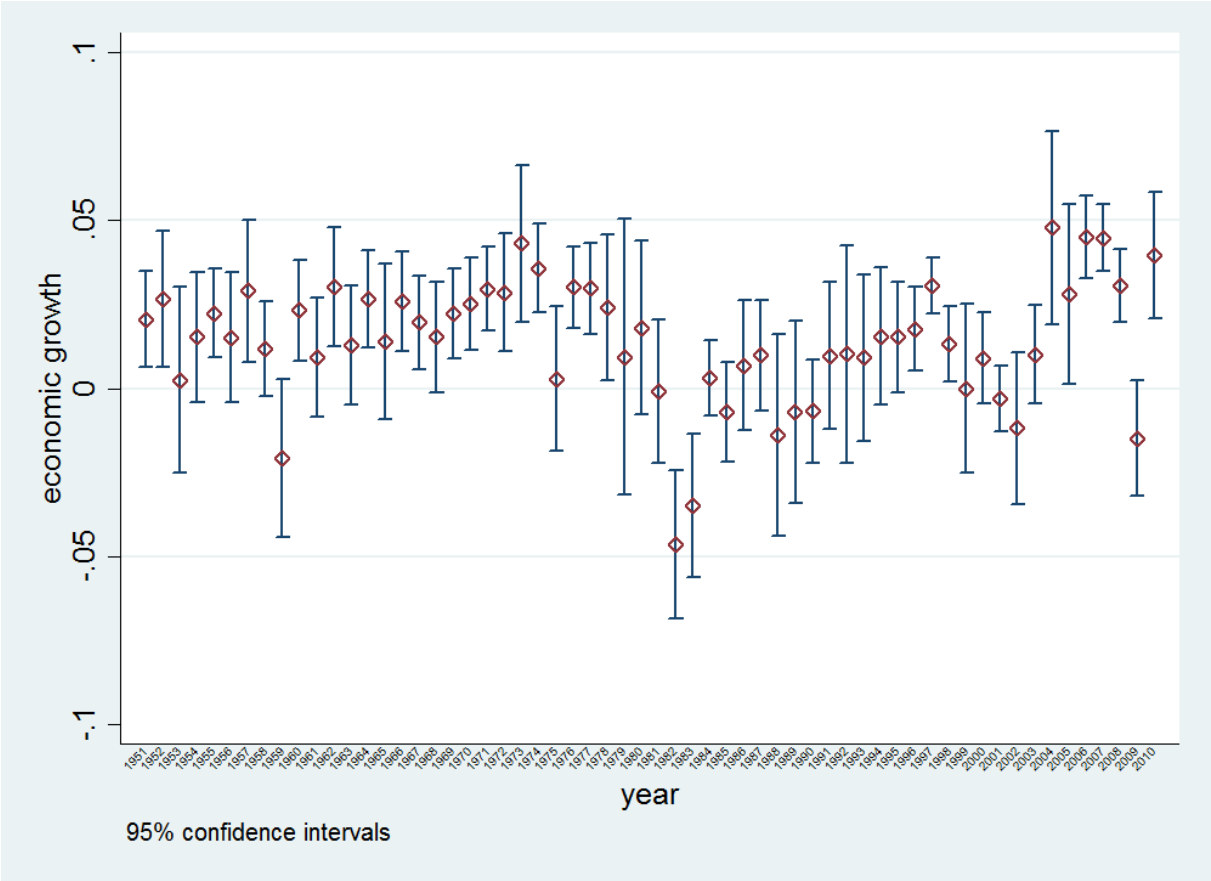

Figure 4.4: Average economic growth rates in 20 LAC for the period 1950 - 2010 (adapted from Maddison Project Database, 2013)

Finally, a scatterplot between both main variables of an underlying OLS regression is presented in figure 4.5 to provide first inductive insights of the possible *linear* relationship between the level of democracy and the levels of GDP per capita for the respective Latin American countries. Polity2 has been used for this visualization due to its continuous character that is more suitable than a dichotomous measure like democratization. According to the graphical inspection of the following figure, the suggested relationship between the level of economic development and democracy appears to be less evident in Latin America. With respect to the stated hypotheses, a linear development should appear between both variables implying that higher values of GDP per capita should lead to higher values of democracy. However, the development of both variables applied for this study do not outline a distinct linear pattern, although the fitted line indicates a positive relationship by outlining a positive slope. The measure for goodness of fit, adjusted R-squared just outlines that 8,8% of the variance of GDP per capita is explaining the variance of Polity2 with a significant slope coefficient of 0.0015

that indicates a nearly negligible statistical effect of GDP per capita on the level of democracy. Similar results are indicated by a visual comparison of the Polity2 scores across the development of logged levels of GDP per capita for each Latin American country for the years 1975 and 2008. These can be withdrawn from figure 8.4 - 8.5 in appendix A[32]. Against the background of the latter visual inspections, Latin American countries seem to have democratized over time but just with a comparatively marginal upward trend in their respective levels of economic development. Thus, these preliminary findings question the validity of the modernization thesis for Latin America. Nonetheless, further examination is necessary to provide sufficient insights in the exact relationship between both variables.

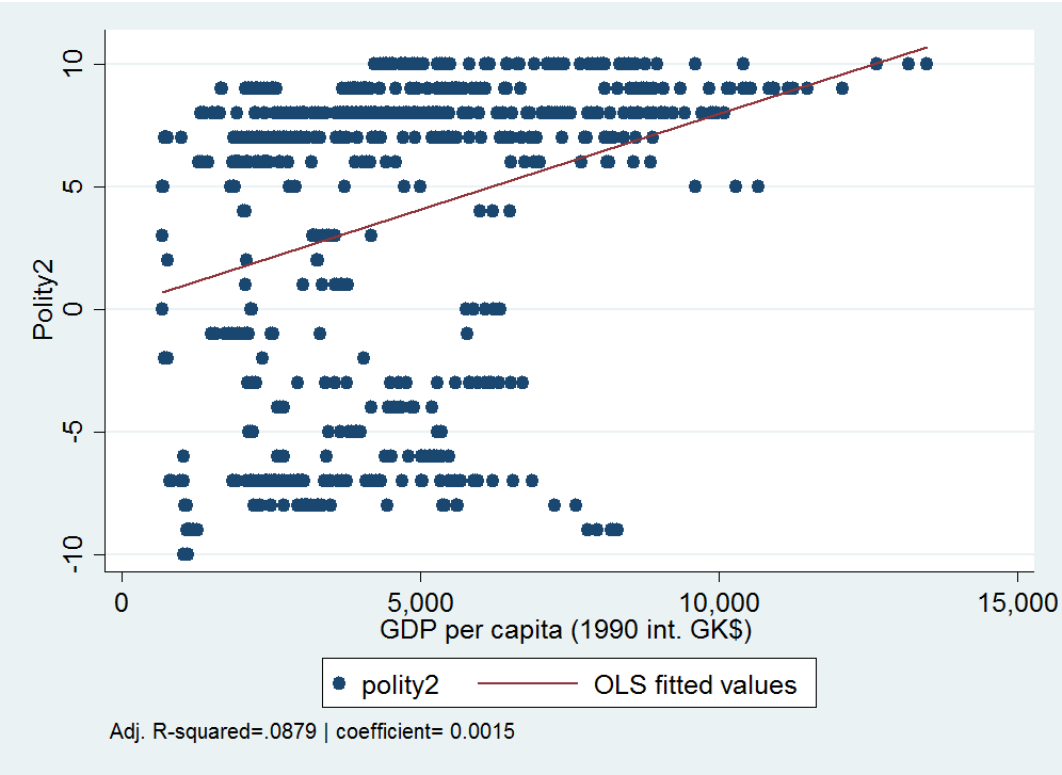

Figure 4.5: Scatterplot with fitted line between Polity2 and levels of GDP per capita over 20 Latin American countries and the period 1975 - 2008; Adj. R-squared and coefficient equal time-series OLS regression estimates America (adapted from Maddison Project Database, 2013 and Center from Systemic Peace, 2016)

[32] Due to spatial limitations, these figures have not been presented at this point of the paper.

4.3 Control variables

Besides the selected democracy measure democratization, the measure for economic development in terms of GDP per capita and the measure for economic growth in terms of year-to-year changes in the GDP per capita level, the literature pointed at the importance of following relevant control variables that will be briefly presented. The variables life expectancy and primary school enrolment rate have been derived from the Latin American dataset "MOxLAD". This database provides estimates for the period of 1870 until 2010 that have been collected and summarized from official publications (MOxLAD, n.d.). Since MOxLAD just presents a country coverage of 20 Latin American nation states, the sample size of this examination will be restricted to this number of countries[33]. Life expectancy is measured in years at birth and primary school enrolment is measured in thousands. Lastly, the variables urban population and fuel exports have been derived from the World Development Indicators (WDI). Urban population is measured as percentage change in population and fuel exports represent the percentage share of total merchandise exports of a country. A summary of all variables and sources can be withdrawn from table 8.1 in appendix A. Furthermore, the sample size of the final models that include all covariates varies marginally because not all of the control variables are available for the whole examination period. Although not a fully consistent availability of the selected variables is given from the point of observation in 1975 that especially holds for the control variables of primary school enrolment and fuel exports these shortcomings have to be taken account[34]. The final temporal coverage of the sample (1975-2008) stands in line with respective studies in this field and is suitable since the third wave of democratization in Latin America can be dated back to the end of the 1970´s (Mainwaring & Pérez-Liñán, 2005). Any adjustments regarding the temporal coverage of the study would provide a less sufficient picture of the possible drivers of democratization in Latin America. Furthermore, the temporal restriction assures consistent estimates since not more than one wave of democratization has been taken place during the time of observation. As presented in the previous chapters, a striking feature of Latin America has been its highly volatile political development in the past.

[33] Only estimates of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Uruguay and Venezuela.

[34] Just the control variables primary school enrolment and fuel exports present a limited temporal coverage that does not fully encompasses the period of 1975 to 2008.

Hence, this prevents the model from generating biased results due to the prevalence of structural breaks in the data as it would be the case if including a longer period of time with several democratization waves. Lastly, table 4.4 presents a comprehensive picture of all variables that have been utilized in the quantitative estimation by outlining their main empirical properties.

Table 4.4 Summary of all covariates by main properties - 1975 - 2008 for 20 Latin American countries

Variable	Mean	Std. Dev.	Min	Max	N
Polity2	3.66	6.37	-10	10	680
Democratization	.10	.31	0	1	680
GDP per capita	4,469.56	2,423.49	672.42	13,479.08	680
Logged GDP per capita	8.24	.59	6.51	9.50	680
Squared GDP per capita	1.82e+08	2.58e+07	2.76e+07	452154.1	680
Economic Growth	.01	.04	-.33	.23	680
Life expectancy	68.12	6.44	48	79	680
Urban population	62.10	17.03	20	94	680
Primary school enrolment	3,192.14	4,719.85	323	20939	650
Fuel exports	14.72	23.45	3.99e-06	95.42	602

5 Methodology

This section provides basic information about the methodological procedure that has been applied in this study. The empirical examination is based on cross-section data pooled over time that allows for an investigation of the impact of socioeconomic parameters on democratizations in the long-run. A conditional logit model has been chosen to test the hypotheses derived from modernization theory.

5.1 Estimation techniques

The selection of a logit model follows the pioneers work of Przeworski & Limongi (1997), as well as recent empirical contributions on this subject (among others Benhabib, Corvalan and Spiegel, 2011; Mainwaring & Pérez- Liñán, 2002; 2005). Additionally, the selection has been motivated by the latest claims of scholars to apply a fixed effect estimation that is more suitable

for the examination of the democratizing effect of economic development (Acemoglu et al. 2009; Kennedy, 2010; Londregan & Poole, 1996). Fixed effects models take into account the heterogeneous character of countries, allowing to control for time-invariant effects like colonial heritage or culture. Hence, not controlling for these factors could lead to an over or underestimation of the democratizing effect of economic development. Combining a fixed effect specification with a logistic model leads to the presented conditional logit model, since the model is based on the condition that residuals of the covariates are correlated with the error term. Furthermore, the application of a non-linear or limited dependent variable model, like a logit estimation, is favourable since the variable of interest has been operationalized as a dichotomous measure. A standard OLS procedure with linear estimation techniques would generate inconsistent results using a binary dependent variable. The underlying linear assumption of the OLS estimation is violated, since the dependent variable cannot adopt values from $-\infty$ to $+\infty$. Thus, linear OLS estimators as in the case of a linear probability model would predict values outside the range of the bounded (binary) variable. (Wooldridge, 2009, p. 530) Applying a non-linear estimation method, like the logit procedure, solves this problem by using the natural logarithm of the odds ratio of the dependent variable. Due to this transformation, the logit model takes the natural constraints of a qualitative limited dependent variable into account and predicts probabilities instead of values that asymptotically approach 1 and 0. (Asteriou & Hall, 2011, pp. 248). The underlying logistic function of a binary response model is presented as follows:

$$\mathrm{G(z)} = \exp(z)\,/[1 + \exp(z)\,] \;= \Lambda(z), \tag{1}$$

whereby the logistic function G lies between 0 and 1 for all real numbers z. Simultaneously, this equation represents the cumulative distribution function for a standard logistic random variable. (Wooldridge, 2009, p. 531).

Contrary to the Ordinary Least Squared (OLS) method, logit models rely on the maximum-likelihood method (MLM) to predict probabilities. One drawback of logit models are their counterintuitive interpretations, since the predicted parameters present logarithmic odds ratios. Therefore, the calculation of marginal effects or marginal probabilities from the model parameters is a common practice to assure a rather intuitive understanding of the results. The necessity of a non-linear estimation procedure has been already stressed by Dahl (1971). He highlighted that the study of democracy as a dependent variable will lead in any case to natural

estimation constraints, since the variable will remain a qualitative or limited variable but will never be a true continuous measure. Thus, to assure an adequate treatment of the limited dependent democratization variable a non-linear application is required.

5.2 The model specifications

The presented estimation technique has been selected according to the demand of an adequate measurement procedure for this study. Following hypotheses have been formulated:

> (1) The *level of economic development* as a long-term measure for economic performance increased the likelihood of gradual increases of the level of democracy in Latin America that occurred under the third wave of democratization following a *linear relationship*.
>
> (2) The *level of economic development* as a long-term measure for economic performance increased the likelihood of gradual increases of the level of democracy in Latin America that occurred under the third wave of democratization following a *curvilinear relationship*.
>
> (3) *Economic growth* as a short-term measure for economic performance decreased the likelihood of gradual increases of the level of democracy under the third wave of democratization in Latin America.

According to these hypotheses, respective a priori expectations have been derived: (1) The measure for the level of GDP per capita presents a *positive significant coefficient* for democratization. (2) The measure for the log level of GDP per capita and the quadratic function of GDP per capita present a *positive significant coefficient* for democratization. (3) Economic growth measured as the year-to-year change of the logged levels of GDP per capita depicts a *negative significant coefficient* on democratization.

As a result, four different empirical model specifications have been developed that follow a conditional logit model to test the different hypotheses of the existence of a linear or curvilinear relationship. The *base line* form of the model equals

$$Prob(D_{ct}) = \beta_0 + \beta_1 P_{ct-1} + \beta_2 Y_{ct-1} + \beta_3 \Delta Y_{ct-1} + \alpha_c + \delta_t + \varepsilon_{ct}, \tag{2}$$

the final form including a vector of covariates and testing for a *linear relationship* equals

$$Prob(D_{ct}) = \beta_0 + \beta_1 P_{ct-1} + \beta_2 Y_{ct-1} + \beta_3 \Delta Y_{ct-1} + \beta_4 Xc_{ct-1} + \alpha_c + \delta_t + \varepsilon_{ct}, \tag{3}$$

the final form including a vector of covariates and testing for a *curvilinear relationship* using a squared term of GDP per capita in levels equals

$$Prob(D_{ct}) = \beta_0 + \beta_1 P_{ct-1} + \beta_2 Y_{ct-1} + \beta_3 (Y_{ct-1})^2 + \beta_4 \Delta Y_{ct-1} + \beta_5 Xc_{ct-1} + \alpha_c + \delta_t + \varepsilon_{ct}, \tag{4}$$

the final form including a vector of covariates and testing for a *curvilinear relationship* using the logarithmic function of GDP per capita equals

$$Prob(D_{ct}) = \beta_0 + \beta_1 P_{ct-1} + \beta_2 \ln(Y_{ct-1}) + \beta_3 \Delta Y_{ct-1} + \beta_4 Xc_{ct-1} + \alpha_c + \delta_t + \varepsilon_{ct}, \tag{5}$$

where D_{ct} denotes the dependent binary variable in terms of the measure for democratization in country c a time t, P_{ct-1} is the lagged measure for the level of democracy by using a country´s Polity2 score, and Y_{ct-1} stands for the previous year's GDP per capita, treated linearly that has been chosen as the measure for the level of economic development. Economic growth is measured by the term ΔY_{ct-1} that represents the year-to-year change of the logged levels of GDP per capita using first differences. A full set of country fixed and time fixed effects are denoted by α_c and δ_t. Controlling for time-variant and time-invariant effects is necessary, since causes for a democratic transition can be determined by exogenous variables that vary over time and across countries. If excluding such controls an omitted variable bias is likely to result of the empirical estimation. As presented in the previous section, the average Democratization, Polity2 and GDP per capita and economic growth distribution of the respective Latin American countries differ in part to a large extent (see figure 4.1 - 4.4 as well as figure 8.1 - 8.5 in appendix A). Thus, applying a fixed effect model takes these time-invariant differences into account. The error term ε_{ct} controls for all other time-varying effects on the level of democracy that are not included in the model. Furthermore, an *adjusted dynamic model specification* has been chosen

by including lags of the Polity2 variable that substitutes the dependent variable on the right hand side of the equation to control for the variability of the democracy levels[35]. Likewise, all other covariates entered the model specifications with one lag to control for effects with a temporal lag on democratization. Hence, the specification allows to control for omitted time invariant effects caused by the time-varying effect of the Polity2 score of each country per year. If such a control is excluded from the estimation, the results are likely to be biased. Since the previous country´s experience with democracy is likely to influence the current state of a country´s democracy level it is necessary to control for the persistence of democracy. The utilization of a dynamic model specification by including lags of the dependent variable has been commonly used in the relevant literature, as well as the utilization of an adequate political covariate that controls for the persistence of democracy (among others see Acemoglu et al. 2009; Benhabib, Corvalan & Spiegel, 2011; Burkhart & Lewis-Beck, 1994, pp. 114-115; Epstein et al. 2006; Faria, Montesinos-Yufa & Morales, 2014; Kennedy, 2010; Przeworski, 1997). In accordance with previous empirical studies, a specification of the levels of GDP per capita, logged levels of GDP per capita and the squared term of GDP per capita has been chosen that includes one lag on the right side of the term (Acemoglu et al. 2009; Benhabib, Corvalan & Spiegel, 2011; Epstein et al. 2006; Helliwell, 1994; Kennedy, 2010). This controls for the lagged dynamics on democracy by assuming that an increase of GDP per capita does not lead immediately to a democratization effect. Rather a change in GDP per capita effects the political regime just after a certain time since the transmission of this change on the economic system and on the daily life of the people takes place incrementally (Huntington, 1991b, p. 35). Moreover, the model includes not only lagged values of GDP per capita but also controls for the explicit GDP growth effect on the level of democracy by using lagged values of first differences of the logged GDP per capita variable (Londregan & Poole, 1996; Mainwaring & Pérez-Liñan, 2005; Przeworski & Limongi, 1997). Results of Przeworski and Limongi (1997) presented that the effect of economic growth on regime stability occurs immediately and not over a long period. Thus, including the variable with one lag is sufficient. As highlighted in section 2, the literature pointed at a separated effect of economic growth on the level of democracy. Prior contributions suggested a regime destabilizing effect of economic growth,

[35] In general, a dynamic model specification implies the inclusion of the lagged dependent variable as an additional explanatory variable on the right hand side of the equation. The presented adjustment has been selected to capture the variability of the continuous Polity2 measure that provided more information than the binary democratization variable.

whereas more recent results stressed a stabilizing regime effect. Both assumption have implications for a democratic transition: a destabilizing effect makes transitions more likely, whereas a stabilizing effect less likely. Hence, economic growth can be associated with a change in the democratization variable and has to be included in the empirical model. The inclusion of the lagged Polity2 variable and the aforementioned economic factor equals the base line estimation presented in equation 2[36]. Equation 3 represents the final model specification that has been utilized to examine the *linear relationship* between economic development as it has been suggested by Lipset (1959). Hence, equation 3 serves as the empirical technique to examine the validity of modernization theory for the democratization in the region of Latin America. To the contrary, equation 4 and 5 outline the model specifications that have been chosen to test a *curvilinear relationship* running from economic development to democratization. The model specification of equation 4 is suitable to test an inversed U-shaped relationship between the level of economic development and democratization that has been initially indicated by Huntington (1968) and O´Donnell (1973) by including a quadratic term of the level of GDP per capita. Both scholars assumed a decreasing likelihood of democratic transitions at certain levels of economic development. A positive coefficient for the initial GDP term combined with a negative coefficient of the squared GDP term would indicate such an inverted U relationship between the level of economic development and democratization. Equation 5 has been chosen to test for an initially linear pattern between economic development and democratization that exceeds diminishing returns if a certain threshold of economic development has been reached. Thus, the linear relationship levels off after reaching the threshold as empirical results of Boix & Stokes (2003) indicated. To test for the potential prevalence of this relationship in Latin America the measure of GDP per capita has been operationalized by a logarithmic transformation. Lastly, additional covariates have been added which are captured by the vector $\beta_2 Xc_{t-j}$ to arrive at the final model specifications according to equation 3 to 5. Each of them enters the estimation with one lag to avoid endogeneity issues. Taking into account different control variables is necessary to forestall an omitted variable bias and to examine the possible relationship between the economic performance factors and democratization in the context of other covariates. Covariates have been selected according to the relevant literature and hence do not outline idiosyncratic factors (among others Lipset, 1959; PACL, 2000; Epstein et al. 2006). These are similar to the standard set of modernization

[36] Henceforth, the equation number refers likewise to the respective model.

indicators and include life expectancy, primary school enrolment rate and urban population that control for the effect of a growing middle-class on democratization. Fuel exports control for a possible resource curse that could hamper democratic transitions. Resources like oil serve as a favourable source of revenues that offer political elites within a country a powerful position because they are less reliant on the consent of citizens. The linkage between these structural factors and democratizations have been likewise assessed in the respective literature (Boix & Stokes, 2003; Epstein et al. 2006). All of these covariates have been incrementally added to the baseline model that initially just controls for the structural economic factors of economic development and economic growth. Thus, the final model tests for the simultaneous impact of an entire set of variables beyond just the economic factors.

As presented, the respective literature pointed at a fixed effect specification. Nonetheless, the appropriateness of this model specification has to be tested to avoid estimation errors. To meet this purpose, a Hausman test has been applied. This test compares a fixed effect model with a random effects model with regard to their properties of generating consistent and efficient results. As presented above, a fixed effect model takes into account individual time-invariant effects that remain unobserved. This specification based on the assumption that the vector of covariates is correlated with the error terms of these unobserved specific effects. Thus, a fixed effect model controls for the unobserved heterogeneity of the cross-sectional elements in the model. To the contrary, a random effects model relies on the assumption that the error term of these individual effects are uncorrelated with the regressors and relies on a strict exogeneity assumption of the covariates. Whenever this assumption is not met, the random effects model is not able to provide consistent estimates. (Woolridge, 2002, pp. 493). Thus, the application of a Hausman test is necessary to assure reliable and valid estimates. Likewise, a standard test has been conducted to test for the joint significance of time fixed effects to choose the most appropriated model specification.

6 Empirical Analysis

This chapter provides information about the results of this examination and their validity with respect to their thorough consistency. Issues will be discussed in the aftermath.

6.1 Results

As stated in the previous section, a Hausman test has been performed to test the consistency of the estimators generated by the fixed and random effects method. This test examines whether the error term ε_{ct} of each country is correlated with the regressors. The null hypothesis of the Hausman test is that the error term and the regressors are not correlated what represents the underlying assumption of the random effects model (Gujarati & Porter, 2009, p. 606). Since the insignificant test results presented in table 6.1 do not allow a rejection of the null hypothesis, a random effects estimation has been chosen for all model specifications that assures more efficient and consistent empirical results. Hence, following unobserved effects logit estimation has been applied instead of the presented conditional logit model:

$$Prob(D_{ct}) = \beta_0 + \beta_1 P_{ct-1} + \beta_1 Y_{ct-1} + \beta_3 \Delta Y_{ct-1} + u_{ct} + \varepsilon_{ct}, \tag{6}$$

Equation 6 equals the adjusted base line model from the previous section. All other model specifications, equation 3-5 that have been presented in section 5.2 follow the same adjustment but are not presented due to spatial limitations of the paper. Instead of the previous presented country and time fixed effects, this model specification adjusts for the random effects estimation by taking into account the term u_{ct} that substitutes the country fixed effects (α_c) and time fixed effects (δ_t). This controls for the random intercepts of all cross-country observations in the sample that are not handled as fixed parameters anymore. Since the random intercepts account for the unobservable effects, these end up in the error term. Following this logic, an unobserved effects logit model relies on a strict exogeneity assumption, implying that the residuals of the covariates are not correlated with the error term or unobserved effects. Therefore, this model is likely to generate inconsistent results if these assumptions are not met (Wooldridge, 2002, pp. 490). Moreover, the risk of an omitted variable bias increases if selecting a random effects model, since it is not automatically controlling for country specific effects anymore.

Table 6.1: Hausman Test Results - Fixed effects vs. Random-effects

Regression based on indicator	**Chi 2**	**Prob>Chi2**	**Results**
Baseline indicators (Model 2)	2.03	0.5671	Does not reject H0. Use RE.

Level of GDP per capita (Model 3)	5.46	0.4868	Does not reject H0. Use RE.
Squared term of GDP per capita (Model 4)	5.64	0.4644	Does not reject H0. Use RE.
Logged levels of GDP per capita (Model 5)	8.95	0.1766	Does not reject H0. Use RE.

Thus, the application of a random effects model raises the demand for time-invariant covariates that control for omitted variable bias of the estimation since this model specification is not automatically controlling for it as in the fixed effect specification. Moreover, a standardized test for estimating the efficiency of time fixed effects generated similar results, indicating a model specification without time fixed effects. To account for these shortcomings the presented structural covariates of primary school enrolment and urban population have been incrementally added to the baseline model. These have been highlighted by Lipset (1959) as additional features of economic development and stand in line with the modernization theory. This assures a comprehensive examination of the presented hypotheses derived from modernization theory and allows to test for competing explanations to income. Primary school enrolment serves as a proxy for education, likewise urban population has been chosen as a proxy for industrialisation. This procedure follows previous applications of Benhabib, Corvalan and Spiegel (2011), Epstein et al. (2006). Furthermore, life expectancy has been added as an additional control for economic development, since it serves as an appropriate measure for living standards and well-being and follows other relevant contributions (Huntington, 1968; Linz & Diamond, 1989). Fuel exports have been used as a control for the resource curse that has been associated with less democratic and unstable regimes (Boix & Stokes, 2003; Epstein et al. 2006).

First, the potential prevalence of a *linear relationship* has been examined with respect of hypothesis 1 of this study by using levels of GDP per capita according to model 3 of section 5.2. Contrary to modernization theory, the empirical results presented in table 6.2 do not indicate a linear relationship between the level of economic development on democratization in Latin America. The coefficient for GDP per capita remains throughout the model extension insignificant. Hence, these empirical results lead to a rejection of hypothesis 1 implying that economic development did not increase the likelihood of gradual increases of the level of democracy in Latin America following a linear relationship. Nevertheless, these results stand in line with previous findings of Acemoglu et al. (2009, p. 1051) that applied a similar empirical

methodology but were not able to confirm the imputed linear relationship of modernization theory. Moreover, other scholars were just able to identify a nearly negligible effect of economic development on democratization for the post-WWII period (Boix and Stokes 2003; Epstein et al. 2006; Londregan & Poole, 1996). Lastly, the insignificant outcome of the level of economic development stands likewise in line with results of Mainwaring and Pérez--Liñán (2005, pp. 27) who provided empirical results for Latin America for the post-1978 period. Their results do not indicate a significant effect of the level of GDP per capita on democratic transitions and hence confirm results of this study. However, the logit model presents a significant, but negative coefficient for the measure of economic growth and provides supporting evidence for hypothesis 3 of this study. Thus, previous year-to-year changes in the log levels of GDP decrease the likelihood of gradual increases of the level of democracy. Again, this result even if contradictory to the prevailing empirical literature has been indicated by previous studies as well. For instance, Kennedy (2010, p. 792) provided empirical results that stand in line with the estimation of this study[37]. Whenever, economic growth is used within his conditional probability estimation it removes the significant effect of economic development on democratization. The coefficient of economic growth present likewise a negative sign in the scholar's estimation (Kennedy, 2010, p. 792; pp. 794). Furthermore, results of Epstein et al. (2006) are as well in accordance with the ones of this study. By applying a markov probit model, Epstein et al. (2006, p. 563) demonstrated that economic growth has indeed a significant inhibiting effect on democratization if measured for autocratic regimes. Whereas their effect of economic growth for democratic regimes is not statistically significant. These results point at the regime stabilizing effect of economic growth, that hold for democracies as well as for autocracies (Przeworski & Limongi, 1997, p. 169) and contradict assumptions of Lipset (1963), Olson (1963) and Huntington (1968) who identified growth as a destabilizing factor. Furthermore, in light of contributions that stressed the prevalence of an economic crisis as a determinant for the post-1978 democratization in Latin America a negative effect of economic growth on democratization in this region appears reasonable (Haggard & Kaufman, 1995, pp. 29). Hence, first empirical results of this study provide evidence that underline the regime stabilizing effect economic growth and make democratic transitions less likely. Lastly, the importance of economic growth rather than the level of economic development for the

[37] Kennedy (2010) applied a dynamic probit model. Since logit and probit models generate similiar results, his empirical results can be taken as a reference.

democratization in the region of Latin America has been already stressed by Diamond and Linz (1989) and stand in line with these empirical findings.

Table 6.2 Results of Random-Effects Logit model: linear predictors of gradual changes of the level of democracy

Dependent Variable: Democratization					
VARIABLES	(Model 2) Baseline Model	Life expectancy	Urban Population	Primary school enrolment	(Model 3) Final linear Model
Polity2 (t-1)	-0.0940***	-0.0769***	-0.0771***	-0.0807***	-0.0957***
	(0.0211)	(0.0215)	(0.0216)	(0.0236)	(0.0239)
Per Capita GDP (t-1)	-6.13e-05	6.80e-06	2.58e-05	4.74e-05	-1.46e-06
	(7.64e-05)	(7.61e-05)	(9.67e-05)	(0.000107)	(0.000117)
Economic Growth (ln, t-1)	-7.728***	-7.591***	-7.699***	-7.913***	-9.734***
	(2.341)	(2.330)	(2.361)	(2.437)	(2.673)
Life expectancy (t-1)		-0.0439*	-0.0393	-0.0327	-0.0184
		(0.0242)	(0.0285)	(0.0317)	(0.0312)
Urban Population (t-1)			-0.00434	-0.00737	-0.00752
			(0.0138)	(0.0158)	(0.0148)
Primary school enrolment (t-1)				1.93e-05	1.82e-05
				(3.49e-05)	(3.08e-05)
Fuel Exports (t-1)					-0.0109
					(0.00844)
Constant	-1.724***	0.929	0.800	0.339	-0.0711
	(0.346)	(1.463)	(1.520)	(1.679)	(1.740)
Observations	680	680	680	651	588
Number of countries	20	20	20	20	20
Log-Likelihood	-212.943	-211.630	-211.581	-198.092	-176.750
Wald (p-value)	34.89 (0.000)	40.38 (0.000)	40.65 (0.000)	34.89 (0.000)	41.39 (0.000)
Pseudo R-Squared	0.0856	0.0953	0.0955	0.0900	0.1172

*Note: Entries are Random-Effects Logit coefficients (heteroscedasticity robust standard errors clustered by country in parentheses). Pseudo-R^2 corresponds to standard logistic model with equivalent specification[38]. *** indicates statistical significance at 1% confidence level, ** at 5% confidence level, and * at 10% confidence interval.*

[38] The measure of R^2 for estimating the goodness of fit of the model, is not meaningful in binary response models and just of secondary importance. Signs and statistical significance of the estimates are of more relevance (Asteriou & Hall, 2011, p. 250; Gujarati & Porter, 2009, pp. 562). However, different measures are available that are similar to the conventional R^2. To provide a comprehensive overview of important measures, Pseudo-R^2 has been calculated in accordance with the estimation procedure of Mainwaring & Pérez-Liñán (2005).

As expected, the lagged Polity2 variable that has been used to control for the persistence of previous democratic experiences presents a significant coefficient. However, rather counterintuitive is the negative sign of the measure. This result appears less surprising if taken into consideration the operationalization of the Polity2 variable as a nearly continuous measure encompassing different absolute levels of democracy ranging from -10 to 10. In comparison to the binary democratization measure, the variability of Polity2 can serve as an explanation for the marginal negative coefficient since the magnitude of the democracy change cannot be captured by the binary dependent variable. Since the binary dependent variable does just present each relative increase in a country´s level of democracy but does not account for a decrease or consolidation of the country´s democracy level the overall effect of the previous democracy level, as measured by the lagged Polity2 variable, cannot control for such effects. This contributes likewise to the negative effect of Polity2 on the probability of the dependent variable to shift from 0 to 1. Although the coefficient of Polity2 becomes significant in the empirical model, its statistical effect is nearly negligible due to the small coefficient. To assure a more intuitive interpretation of the coefficients of the logistic estimation, marginal effects on the dependent variable conditioned by the means of the regressors of the model have been calculated. Table 6.3 presents the predicted probabilities of a democratization as a function of the covariates with a significant effect following the delta method, holding the unobserved effects (random effects) at zero.

Table 6.3 Predicted Impact of Selected Variables on the Probability of Democratizations

Variable	**1975 - 2008**
	Predicted Democratizing Rate (%)
Polity2 (t-1)	-0.7
Economic Growth (ln, t-1)	-72.8

Note: Based on logit model 3 of table 6.2. The covariates are set at their means. Average marginal effects present the impact of the covariates at their means on the probabilities of democratization.

The marginal effects at the means of all covariates indicate that a one unit increase in the lagged democracy variable Polity2 forestalls the average probability of a democratization by 0.7

percentage point, if looking at the period 1975 until 2008. This nearly negligible effect in its magnitude appears considerable if taken into consideration that the measure of Polity2 served as the source for the binary democratization variable. Likewise, the presented marginal effect of economic growth implies that the probability of a democratization decreases by 72.8 percentage points if the last year's economic growth increases by one percent, holding all other covariates at their means. Hence, this marginal effect indicates a great regime stabilizing effect that seems likewise reasonable. Economic growth is one of the main properties to evaluate the economic performance of a government. Thus, the citizen's satisfaction with a country´s government depend in part on the "performance legitimacy" as it has been already suggested by Huntington (1991). Against this background, economic growth has a large impact on the satisfaction of citizens and unfolds its effect already in the short run. For instance, Przeworski & Limongi (1997, p. 169) provided evidence that vice versa, economic crises are the biggest threat for political stability that would rather lead to an opportunity window that enables democratic transitions than sustainable economic growth.

Apart from the discussed significant results of the lagged variables Polity2 and economic growth, all other covariates that have been incrementally added presented no significant coefficients for the chosen sample (see Table 6.2). Hence, this indicates no statistically significant association of the covariates with democratization, contrary to the theoretical assumptions imputed by the modernization theory. In light of the relevant literature, covariates of education, urban population and resource curse are mostly significant on the 10% level (Epstein et al. 2006; Kennedy, 2010). However, empirical studies like the aforementioned were based on six to seven times larger samples due to a larger temporal and regional coverage. Thus, the variation of the outcome of the logit estimation can be explained by the sensitivity of the estimates due to a differing sample size. Moreover, one can expect that all these covariates unfold their impact on democratization over a long period of time since they are rather long-term proxies of economic development and the previous year's change might not be sufficient enough to capture the predicted association. However, including the presented covariates did not lead to any changes in the variables of interest in this study that indicates consistency of the baseline model across different adjustments.

Lastly, the question remains whether the third wave of democratization in Latin America can be explained by a rather curvilinear relationship between economic development and democracy as suggested by hypothesis 2. To examine a curvilinear relationship, model 4 includes besides the measure of GDP per capita an additional quadratic term of GDP per capita.

This operationalization aims to test the potential prevalence of an inverse U-shaped relationship as suggested by Huntington (1968) and O´Donnell (1973). To the contrary, model 5 examines a curvilinear relationship that indicates an initial linear pattern that levels off with a certain level of economic development by using logged levels of GDP per capita. This stands in accordance with findings of Boix and Stokes (2003). Table 6.4 presents the previous linear empirical model in juxtaposition to both curvilinear estimations[39]. Similar to the previous results, economic development does not present a significant coefficient in both curvilinear estimations. Hence, these findings do not provide empirical evidence for the prevalence of a curvilinear relationship, neither in form of an inversed U-shaped pattern, nor in form of a logarithmic curve. In light of these results, hypothesis 2 has to be rejected and the conclusion has to be drawn that economic development did not increased the likelihood of a gradual increase in the level of democracy following a non-linear relationship. Nonetheless, the measures for economic growth and Polity2 present consistently significant and negative coefficients, similar to the previous linear estimation. Likewise, none of the additional control variables present significant coefficients in both curvilinear estimations. The assumptions made for the previous model are likely to be valid for the non-linear models as well since the behaviour of the coefficients do not differ to a large extent. Due to spatial limitations of this study, a separate presentation of the marginal effects of both curvilinear estimations is only presented in table 8.4 in appendix B. Finally, this section presented that the regional case of Latin America appears as an anomaly in which movements towards democratization are less determined by the level of economic development since none of the empirical models provided supporting evidence for a democratizing effect of economic development. This questions especially the validity of modernization theory with respect to the linear examination. Moreover, the findings were likewise not able to confirm alternative explanations that suggested a non-linear relationship between democratic transitions and the level of economic development. Apart from these results, most striking is the result that the general variation of the respective estimates across the three applied models behave very similar that already point at consistent findings of this study.

[39] A detailed presentation of both curvilinear estimations following the same procedure as applied in table 6 for the linear model can be drawn from table 8.2 and 8.3 in appendix B.

Table 6.4 Linear and Curvilinear Logit Regressions of gradual increases in the level of democracy on economic development

Dependent Variable: Democratization VARIABLES	(Model 3) Level Per Capita GDP	(Model 4) Squared Per Capita GDP	(Model 5) Logged Per Capita GDP
Polity2	-0.0957***	-0.106***	-0.0976***
	(0.0239)	(0.0252)	(0.0243)
Per Capita GDP (t-1)	-1.46e-06	-0.000383	
	(0.000117)	(0.000299)	
Squared Per Capita GDP (t-1)		3.43e-08	
		(2.40e-08)	
Logged Per Capita GDP (ln, t-1)			-0.165
			(0.465)
Economic Growth (ln, t-1)	-9.734***	-9.742***	-9.619***
	(2.673)	(2.685)	(2.669)
Life expectancy (t-1)	-0.0184	-0.0111	-0.0159
	(0.0312)	(0.0317)	(0.0313)
Urban Population (t-1)	-0.00752	-0.00739	-0.00509
	(0.0148)	(0.0151)	(0.0142)
Primary school enrolment (t-1)	1.82e-05	3.29e-05	2.04e-05
	(3.08e-05)	(3.27e-05)	(3.13e-05)
Fuel Exports (t-1)	-0.0109	-0.0106	-0.0101
	(0.00844)	(0.00827)	(0.00842)
Constant	-0.0711	0.251	0.955
	(1.740)	(1.747)	(3.330)
Observations	588	588	588
Number of countries	20	20	20
Log-Likelihood	-176.750	-175.843	-176.688
Wald (p-value)	41.39 (0.000)	42.47 (0.000)	41.20 (0.000)
Pseudo R-Squared	0.1172	0.1217	0.1175

*Note: Entries are Random-Effects Logit coefficients (heteroscedasticity robust standard errors clustered by country in parentheses). Pseudo-R^2 corresponds to standard logistic model with equivalent specification. *** indicates statistical significance at 1% confidence level, ** at 5% confidence level, and * at 10% confidence interval.*

6.2 Robustness

Several robustness tests have been conducted to test the consistency of the results. Due to the similar results of all previous empirical models, the linear specification has been chosen as the base for the robustness tests. Temporal and country specific subsamples have been derived from the original sample according to special properties the literature pointed at. Moreover, the robustness tests can help to identify anomalies of Latin America that may accounted for the rejection of modernization theory due to certain country characteristics. All estimates can be withdrawn from table 6.5.

The first subsample presents a logit estimation with respect to all Latin American countries that present a lower average level of economic development than 8.7 measured in terms of logged GDP per capita levels. This subsample does just include 15 out of the previous 20 Latin American countries. Argentina, Chile, Mexico, Uruguay and Venezuela have been excluded from the subsample due their average high economic performance. Especially contributions of Boix and Stokes (2003), provided evidence of "diminishing returns of democratizations as a function of economic development". Following this logic, one could expect that a subsample of Latin American countries with a lower economic performance on an average scale between the period of interest (1975-2008) presents different results. Precisely, we would expect that the likelihood of a democratic transition increases for these countries according to their lower levels of economic development. Contrary to these assumptions, the results presented in the following table provide no supporting evidence. Unaltered, the measure for economic development remains insignificant in this subsample if predicting its impact on the probability of future democratization.

The second robustness test encompasses a subsample of Latin American countries that present a lower average economic growth rate than 1,5% over the period 1975 until 2008[40]. As highlighted in the previous chapters and the main empirical findings so far, economic growth is forestalling the likelihood of democratic transitions. Regime stabilization effects of economic growth that hold for any kind of political regime can serve as an explanation for this

[40] The sample size has been reduced to 10 countries. Brazil, Chile, Colombia, Costa, Dominican Republic, Ecuador, Mexico, Panama, Peru and Uruguay have been exclude from the sample due to higher average growth rates throughout the period under consideration.

relationship. Taken these assumptions for granted, one would suggest that a subsample of countries with comparatively lower economic growth rates indicates rather a positive effect of economic growth on democratization since the “performance legitimacy” of a regime decreases. However, the results of the subsample show an unchanged negative and significant coefficient for economic growth.

Table 6.5: Robustness Tests

Dependent Variable: Democratization	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Final linear Model	Subsample LIC	Subsample LGR	Subsample Democ	Subsample Outliers	Subsample 1975 - 1990	Subsample FE
Polity2 (t-1)	-0.0957***	-0.109***	-0.0993**	-0.143***	-0.0777***	-0.0970***	-0.120***
	(0.0239)	(0.0308)	(0.0496)	(0.0336)	(0.0241)	(0.0335)	(0.0369)
Per Capita GDP (t-1)	-1.46e-06	-0.435	-0.000259	-0.000295	7.22e-05	-0.000275	0.000219
	(0.000117)	(0.562)	(0.000320)	(0.000184)	(0.000117)	(0.000217)	(0.000168)
Economic Growth (ln, t-1)	-9.734***	-12.23***	-8.898**	-7.887***	-9.963***	-10.20***	-10.44***
	(2.673)	(3.399)	(3.955)	(3.054)	(2.728)	(3.193)	(2.849)
Life expectancy (t-1)	-0.0184	-0.0234	-0.0371	0.00283	-0.0117	-0.0154	0.0535
	(0.0312)	(0.0351)	(0.0525)	(0.0389)	(0.0319)	(0.0432)	(0.0777)
Urban Population (t-1)	-0.00752	-0.00215	-0.0265	0.00715	-0.0141	0.0126	-0.0389
	(0.0148)	(0.0219)	(0.0314)	(0.0203)	(0.0155)	(0.0195)	(0.0689)
Primary school enrolment (t-1)	1.82e-05	1.63e-05	0.000565	1.62e-05	5.76e-06	2.92e-05	2.82e-05
	(3.08e-05)	(5.29e-05)	(0.000567)	(4.25e-05)	(3.10e-05)	(4.22e-05)	(0.000252)
Fuel Exports (t-1)	-0.0109	0.00363	-0.0169	-0.000381	-0.00710	-0.00617	-0.0198
	(0.00844)	(0.0111)	(0.0215)	(0.0105)	(0.00935)	(0.0112)	(0.0169)
Constant	-0.0711	3.332	2.174	-1.200	-0.335	-0.440	
	(1.740)	(4.065)	(2.680)	(2.251)	(1.770)	(2.337)	
Observations	588	419	265	452	469	273	512
Number of countries	20	15	10	14	16	18	16
Log-Likelihood	-176.750	-127.041	-80.107	-124.236	-164.700	-102.316	-142.648
Wald (p-value)	41.39 (000)	33.58 (0.000)	(18.38) 0.0104	38.98 (0.000)	29.98 (0.000)	22.40 (0.002)	37.58 (0.000)
Pseudo R-Squared	0.1172	0.1201	0.1441	0.1644	0.0914	0.1270	0.1172

*Note: Entries are Random-Effects Logit coefficients (heteroscedasticity robust standard errors clustered by country in parentheses). Pseudo-R^2 corresponds to standard logistic model with equivalent specification. *** indicates statistical significance at 1% confidence level, ** at 5% confidence level, and * at 10% confidence interval. Final linear model equals model 3. LIC = Lower Income Countries (mean logged GDP per capita<= 8.5); LGR = Low Growth Rates (average growth rates <= 0.015); Democ= countries with average Polity2 score>= 2.5; Outliers = countries that just present at maximum one democratization event throughout the sample period; FE = Fixed effect estimation instead of random effects*

The third subsample was based on the selection criterion of the average level of democracy of the cross-sections. The democratizing effect of economic development and economic growth was examined just by a restricted sample of countries that presented a higher average Polity2 score than 2.5[41]. Thus, this model adjustment allowed for an examination of the suggested effects just for gradual increases of the democracy level that happened within the range of average democratic regimes and not accounting anymore for changes within authoritarian regimes. According to Przeworski and colleagues (1997, 2000) exogenous democratization approach one would expect a positive and significant effect of economic development on the level of democracy. In their logic, economic development is likely to promote democracies whenever they are already in place. However, this study cannot provide evidence for this suggestion. The coefficient of economic development remains insignificant. Thus, these results do not provide evidence for an exogenous explanation of democratization.

The fourth robustness model aimed to assure for a consistent examination of the democratizing effect by avoiding largely heterogeneous behaviour in the overall democracy level of the countries. An exploration of the data presented Costa Rica, Colombia, Venezuela and the Dominican Republic as outliers with respect to their frequency of democratization events. Throughout the sample period, these countries did present a frequency of democratization events of two or less and hence would may contribute to biased results. Nonetheless, a subsample excluding these outliers does not present a variation in the important estimates of the full baseline model of this study. Hence, according to the findings of this subsample the overall results cannot been driven by outliers.

The fifth robustness test was conducted by a temporal restricted sample that just encompassed the period 1975 - 1990. This period has been most important for the post-1978 democratization in Latin America, since the phase of democratic transitions was finalized by 1990 (Huntington, 1991; Mainwaring & Pérez-Liñán, 2005). In case that the economic factor of GDP per capita indeed served as an important source for the democratization of Latin America, one could suggest that a temporal more restricted sample is more likely to unmask the democratizing effect of economic development. A longer period could blur the potential effect due to an interplay with other relevant factors. Nonetheless, this subsample does not provide contrary results to the previous findings: the measure for economic development

[41] The sample has been reduced to 14 countries. Chile, Cuba, Guatemala, Haiti, Mexico and Paraguay have been excluded due to a lower average Polity2 score than 2.5 throughout the sample period 1975 - 2008.

remains insignificant and all other covariates of the model present likewise similar coefficients with respect to the aforementioned samples.

Lastly, the sixth robustness test aimed to compare a fixed effect model following the same model specification as in the unconditional logit model. Although, the results of the Hausman test clearly indicated a random effects specification for the logit model, it seems intuitively misleading not to control for the heterogeneity character of the respective Latin American countries. Although the region shares historical patterns, each country still presents distinct characteristics that could bias the empirical results if they are not controlled for. However, the model estimates of the fixed effects estimation do not differ from the random effects model: the measure for economic development remains insignificant and economic growth and the Polity2 variable indicate still a significant and negative coefficient. As a conclusion, all subsamples presented coefficients that just marginally changed in their magnitude but behaved similar with respect to their important characteristics of significance and sign. Thus, the predicted estimates of the main models remain consistent across the different robustness tests that confirm the credibility of the results of this study.

Nonetheless, the applicability of different robustness tests have been constrained. Excluding too many countries or reducing the temporal coverage of the sample to a large extent leads either to an insufficient number of cross-section or time series observations. This causes in many cases an insignificant Wald test, and indicates a not statistically significant model. Nonethless, all findings that have been reported do just outline results of an *overall significant model*. However, the variation in numbers of observation bias the comparability of the respective coefficients. Lastly, post estimation tests regarding heteroscedasticity are not necessary, since the maximum likelihood estimation of the logit model is automatically controlling for it and all estimations have been conducted in accordance to country clustered standard errors (Wooldridge, 2006, p. 586).

6.3 Discussion

As presented, the results of this examination stand in line with many empirical findings of previous studies and give not rise to doubt the overall validity. Nonetheless, in the light of modernization theory and empirical findings that confirmed endogenous democratization, Latin America stands out as an exceptional case. Economic development was identified as a less

crucial determinant of democratization in Latin America, than predicted. Hence, this subchapter tries to identify possible explanations for these deviating results.

The insignificant estimates for the level of economic development point at two possible causes. Either the results are objective of empirical flaws that undermine the true impact of economic development on democratization, or the results rather point at regional dynamics of Latin America that stand not in line with assumption made by modernization advocates.

Let me briefly discuss the first possibility. As already presented in section 2, the inconsistency of results upon this topic can be ascribed to a large degree to the vulnerability of the estimation results that depend largely on the operationalization method and measure selection (see for a discussion Bollen & Jackman, 1989; Casper & Tufis, 2003; Collier & Adcock, 1999; Epstein et al., 2006; Paldam & Gundlach, 2008; Haggard & Kaufman, 2016; Munck & Verkuilen, 2002). For instance, the main specification of this model was just controlling for the previous year's effect of economic development and economic growth. However, an investigation of the effects over a longer time period by using more lags of the respective variables could provide different evidence. The structural factor of economic development presents comparatively slow dynamics. This might serve as an explanation for the insignificant results. Although economic growth unfolds a rather immediate effect on democratic transitions, one could suggest that changes of the level of economic development on democratization just appear after a longer period. The "trickle-down" effect of increasing levels of economic development to households, influencing their income and educational patterns takes time. Furthermore, this examination relied on a comparatively small sample that was based on an intermediate number of cross-section observations due to its regional focus. Such samples are more prone to produce less consistent results. Outliers and model adjustments can easily affect the outcome of the model. Lastly, the invariability of the dependent variable that has been used in the empirical examination could likewise contribute to differing results. The operationalization of the binary measure just accounted for a gradual increase but not for the consolidation or decrease of the level of democracy.

In addition, a consistent dynamic model specification has been chosen including just lagged covariates to avoid endogeneity issues. However, it is noteworthy to mention that the likelihood of democratization do not necessarily depend on economic development and economic growth, but economic development and economic growth can be likewise promoted

by the prevalence of higher levels of democracy. This issue of reverse causality contributes to the lack of consensus upon the relationship between democracy and economic growth. Due to limitations of this survey, the endogeneity issue could not be taken into consideration and the examination just concentrated on the identification of a possible relationship but not of a possible causality. However, the direction of this relationship is currently highly disputed and should be addressed in future research.

Lastly, a possible shortcoming of this empirical study could have been the lack of adequate control variables that account for the cultural history of each Latin American country. Since a random effects model has been applied the likelihood of an omitted variable bias increased if not including appropriate regressors. However, the selection of adequate covariates has been limited due to data availability and still unknown drivers of democratization. Besides, the empirical findings have been robust over a fixed effect estimation as well that give less rise for an omitted variable bias. Thus, these results rather point at *regional patterns* that have been responsible for the post-1978 democratization. This leads me to the second possibility why the results of this study stand not in line with modernization theory. Restricting the sample to just one region enables a more precise picture of the time-series variations that account more efficiently for the possible correlation between democracy and the level of economic development *within* and not only *between* the chosen countries in Latin America. Since the analysis based on just one region the overestimation of cross-section variations that could account for the endogenous democratization has been constrained to a certain degree. As in the case of Latin America, most countries share a similar political and economic history that makes correlations resulting out of cross-section variations less likely than large N-samples would produce. These large N-samples present a greater heterogeneous character due to the inclusion of countries that are located at both income and regime tails. In this logic, findings of empirical studies that have been able to provide evidence for the relationship between economic development and the level of democracy could rather result out of the cross-section variations that are an outcome out of the global income and political regime distribution. Most of the wealthier countries in the world are more democratic, while most of the poorer countries are less democratic (see for a detailed discussion Robinson, 2006). An empirical study that just focusses on Latin America softens this “global pattern” since the sample is restricted to middle-income countries that are likewise characterised by intermediate political regime types that neither represent democracies, nor autocracies (see also Epstein et al. 2006; Mainwaring & Pérez-Liñán, 2002). These regional characteristics of Latin America could account for the

failure of identifying the suggested relationship. Therefore, these results yield possible information that the relationship between economic development and democratization is rather a product of a global pattern, but is less valid for particular regional developments like the ones of Latin America. Hence, these results point at the prevalence of other important factors than economic development that have been crucial for the third wave of democracy in Latin America.

7 Conclusion

The point of departure for this study has been the third wave of democracy that occurred in Latin America in the 1980s. Of interest has been the identification of possible drivers of this democratizing wave. Although highly disputed, modernization theory pointed at the structural factors of economic development and to a lesser degree at economic growth as drivers of democratic transitions. This suggested relationship, known as the endogenous democratization approach, has received much attention in the past and recent qualitative and quantitative literature. While some scholars provided evidence for the relationship, others stressed the importance of rather qualitative factors that are increasing the likelihood of a regime change towards democracies. In light of the controversy about the implications of modernization theory, this study aimed to examine the likelihood of democratic transitions in Latin America in the post-1975 period as a function of changes of the level of economic development, measured in terms of GDP per capita, and economic growth. Against the background of the democratizing wave in Latin America, this study was able to explore in detail some of its possible catalysts. Based on initial assumptions made by advocates of modernization theory, this study was mainly driven by three hypotheses: *1. The level of economic development increased the likelihood of gradual improvements of the level of democracy in Latin America following a linear relationship. 2. The level of economic development increased the likelihood of gradual improvements of the level of democracy in Latin America following a curvilinear relationship. 2. Economic growth as a short-term proxy for economic performance decreased the likelihood of democratization.* As presented in the previous chapters, the empirical investigation was not able to identify economic development as a catalyst of democratizations. Neither in terms of a linear relationship, nor in terms of a curvilinear relationship did economic development contribute to the probability of a gradual increase of the relative level of democracy in Latin America of the post-1975 period. Thus, this study cannot provide evidence

for the endogenous democratization approach suggested by modernization theory. Likewise, alternative explanations that pointed at a non-linear relationship had to be rejected against the light of these empirical findings. However, the results indicated a significant, but negative effect of economic growth on democratization in Latin America. This finding stands in line with previous studies and point at a regime stabilizing effect of economic growth that decreases the likelihood of democratic transitions.

Turning back to Latin America, the region appears as a contradicting case of modernization theory. The results of this study indicate that other factors than economic development were important for the third wave of democratization. As highlighted by previous studies on this subject, qualitative factors like the political culture or the international political environment might provide more insights for the democratization wave in Latin America, than the examined structural factor of economic development (Boeninger, 1997; Diamond, Linz & Lipset, 1989; Haggard & Kaufman, 2016; Karl, 1990; Mainwaring & Pérez-Liñán, 2005). Even in light of the empirical findings of previous studies that confirmed the importance of economic development for transitions towards democracies, most of them hold fewer implications for Latin America. Their scope of examination encompasses all regions of the world and takes not into consideration regional or even country specific characteristics that are crucial for the investigation of this complex relationship. As previously highlighted, Latin America stands out as an exceptional regional case. Empirical deviations are likely to be an objective of less polarizing income and political regime distributions between the regions in Latin America that cannot drive the cross-sectional variation to the same extent as large N-sample can do. Therefore, the results of this study point on the one hand at regional specific factors that have been crucial for the third wave of democracy in Latin America. On the other hand, the results likewise question the inferences of other empirical studies that confirmed the suggested relationship of modernization theory. These results might be in great part a product of the cross-section variations of large N-samples but provide less information on the time-series pattern within the countries. Thus, generalisations of the suggested relationship between economic performance and democratization are misleading and do not account for regional dynamics. Against the background of a limited availability of empirical studies that focussed on Latin America, future research is needed to provide more insights in the possible relationship putting greater emphasis on qualitative factors. However, a regional focus determines constraints on the scope of empirical analysis, especially for a panel data estimation since the number of cross-sections will be comparatively low. Thus, new methodological procedures like a mixed-method

approach are necessary in the field that are able to address these weaknesses. Nonetheless, all presented results in this study are still probabilities and not certainties. They may are a product of the failure to control for factors that are either idiosyncratic or systematic. Hence, any interpretation of these results with respect to Latin Americas post-1978 democratization have to be qualified against the light of these circumstances.

Lastly, one should not forget that democracy and democratization as an aggregated social outcome depends on complex interrelationships between different factors - such as structural as well as qualitative ones. Thus, every attempt that tries to trace the determinants of democratization risks to overlook important factors that could contribute to misleading inferences. The results of this study especially highlighted that the modernization theory, as a generalisation of democratization patterns can be fallacious and regional idiosyncrasies have to be considered as well to understand the relevant dynamics of democratic transitions.

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Appendix A

Table 8.1 Variables and Sources

Variable name	Description	Source
Democratization	Binary measure for the gradual increase in the level of democracy	Own operationalization, adapted from Polity IV
Fuel exports	Fuel exports (% of merchandise exports)	WDI
GDP growth	Year-to-year change in the log levels of GDP per capita	Own operationalization, adapted from Maddison Project Database
GDP per capita	Real GDP per capita (constant 1990 int. $)	Maddison Project Database
Life expectancy	Life expectancy at birth (years)	MOxLAD
Polity2	Revised combined polity score ranging from -10 to 10.	Polity IV
Primary school enrolment	Primary school enrolment (thousands)	MOxLAD
Urban Population	% change in Population with a temporal overage from 1960 - 2010	WDI

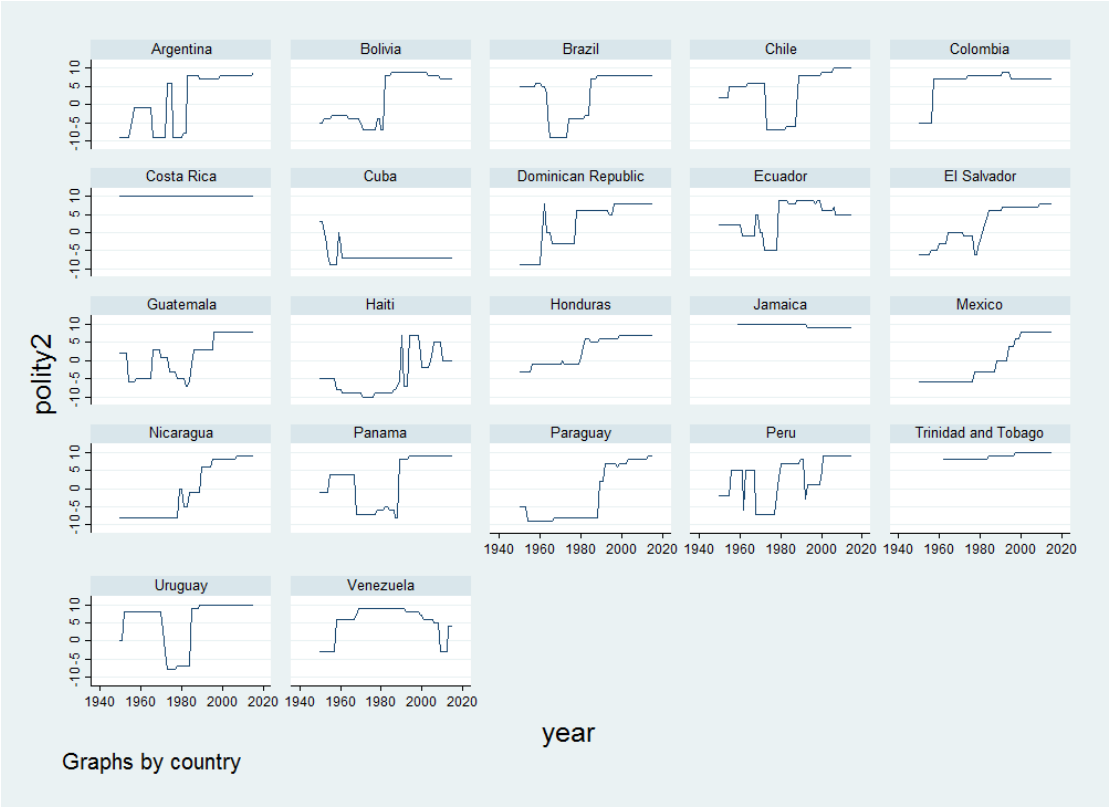

Figure 8.1: Polity2 development of each LAC for the period 1950-2008 (adapted from Center for Systemic Peace, 2016)

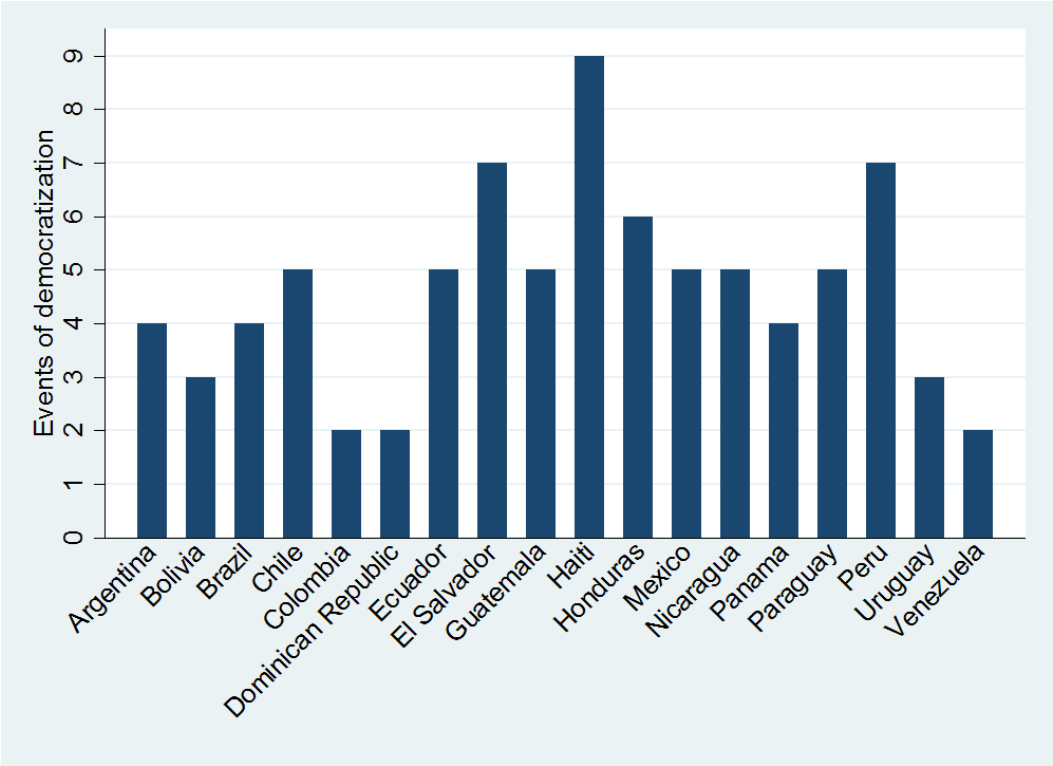

Figure 8.2: Frequencies of democratizations in the 17 Latin American countries between 1975 - 2008; Costa Rica, Cuba and Venezuela are missing because they did outline any democratization within the respective period of 1975 - 2008

Figure 8.3: GDP development for 20 LAC for the period 1950-2008

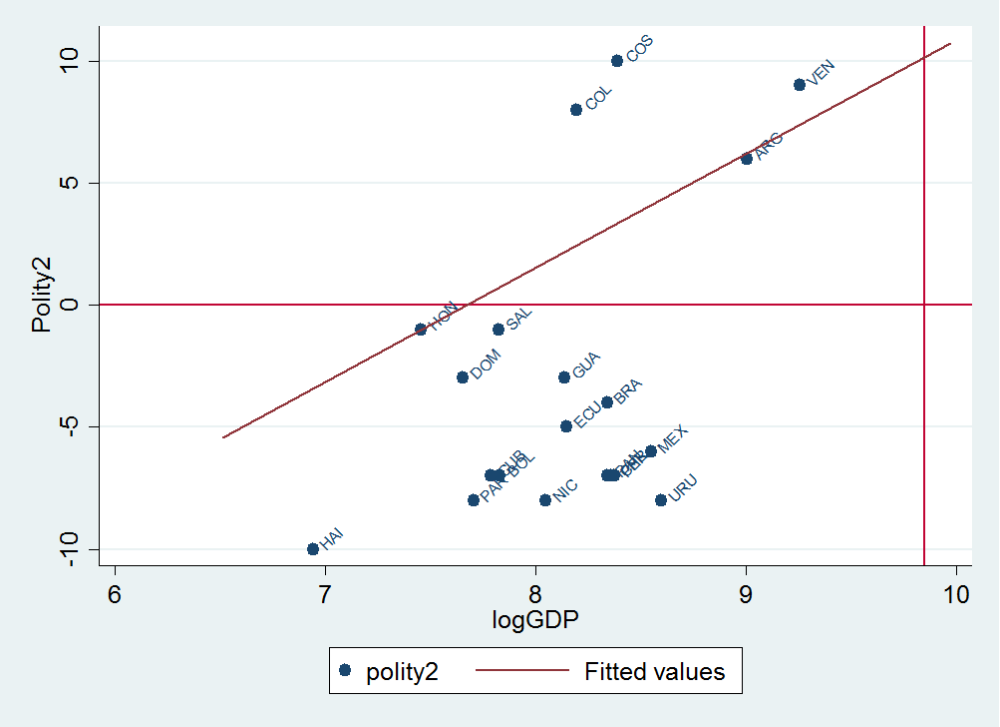

Figure 8.4: Polity2 score across logged levels of GDP per capita for each LAC - 1975

Figure 8.5: Polity2 score across logged levels of GDP per capita for each LAC - 2008

Appendix B

Table 8.2: Results of Random-Effects Logit model: curvilinear predictors of gradual changes of the level of democracy - utilization of a quadratic GDP term

Dependent Variable: Democratization VARIABLES	(1) Baseline Model	(2) Life expectancy	(3) Urban Population	(4) Primary school enrolment	(5) Final curvilinear Model
Polity2 (t-1)	-0.0988***	-0.0816***	-0.0814***	-0.0842***	-0.106***
	(0.0221)	(0.0239)	(0.0238)	(0.0259)	(0.0252)
Per Capita GDP (t-1)	-0.000344	-0.000151	-0.000127	-7.31e-05	-0.000383
	(0.000243)	(0.000272)	(0.000295)	(0.000338)	(0.000299)
Squared Per Capita GDP (t-1)	2.79e-08	1.47e-08	1.36e-08	1.06e-08	3.43e-08
	(2.20e-08)	(2.38e-08)	(2.42e-08)	(2.77e-08)	(2.40e-08)
Economic Growth (ln, t-1)	-7.663***	-7.560***	-7.629***	-7.887***	-9.742***
	(2.362)	(2.347)	(2.377)	(2.446)	(2.685)
Life expectancy (t-1)		-0.0372	-0.0345	-0.0290	-0.0111
		(0.0278)	(0.0310)	(0.0340)	(0.0317)
Urban Population (t-1)			-0.00286	-0.00687	-0.00739
			(0.0148)	(0.0164)	(0.0151)
Primary school enrolment (t-1)				2.43e-05	3.29e-05
				(3.87e-05)	(3.27e-05)
Fuel Exports (t-1)					-0.0106
					(0.00827)
Constant	-1.182**	0.796	0.719	0.305	0.251
	(0.566)	(1.546)	(1.594)	(1.725)	(1.747)
Observations	680	680	680	651	588
Number of countries	20	20	20	20	20
Log-Likelihood	-212.186	-211.438	-211.420	-198.019	-175.843
Wald (p-value)	34.02 (0.000)	38.39 (0.000)	38.65 (0.000)	34.06	42.47 (0.000)
Pseudo R-Squared	0.0878	0.0957	0.0959	0.0900	0.1217

*Note: Entries are Random-Effects Logit coefficients (heteroscedasticity robust standard errors clustered by country in parentheses). Pseudo-R^2 corresponds to standard logistic model with equivalent specification. *** indicates statistical significance at 1% confidence level, ** at 5% confidence level, and * at 10% confidence interval.*

Table 8.3: Results of Random-Effects Logit model: curvilinear predictors of gradual changes of the level of democracy - utilization of a logged GDP per capita term

Dependent Variable: Democratization VARIABLES	(1) Baseline Model	(2) Life expectancy	(3) Urban Population	(4) Primary school enrolment	(5) Final curvilinear Model
Polity2 (t-1)	-0.0938***	-.07745***	-0.0773***	-0.0789***	-0.0976***
	(0.0210)	(.0220)	(0.0220)	(0.0233)	(0.0243)
Logged Per Capita GDP (ln, t-1)	-0.326	-.0522	-0.0288	0.222	-0.165
	(0.274)	(.299)	(0.375)	(0.430)	(0.465)
Economic Growth (ln, t-1)	-7.584***	-7.539***	-7.578***	-7.959***	-9.619***
	(2.348)	(2.335)	(2.367)	(2.440)	(2.669)
Life expectancy (t-1)		-.0399	-0.0386	-0.0351	-0.0159
		(.0264)	(0.0294)	(0.0315)	(0.0313)
Urban Population (t-1)			-0.00142	-0.00766	-0.00509
			(0.0138)	(0.0151)	(0.0142)
Primary school enrolment (t-1)				1.75e-05	2.04e-05
				(3.45e-05)	(3.13e-05)
Fuel Exports (t-1)					-0.0101
					(0.00842)
Constant	0.684	1.112	0.919	-1.098	0.955
	(2.224)	(1.909)	(2.: 677)	(3.163)	(3.330)
Observations	680	680	680	651	588
Number of countries	20	20	20	20	20
Log-Likelihood	-212.557	-211.618	-211.613	-198.060	-176.688
Wald (p-value)	34.40 (0.000)	39.55 (0.000)	39.71 (0.000)	35.52 (0.000)	41.20 (0.000)
Pseudo R-Squared	0.0873	0.0953	0.0953	0.0906	0.1175

*Note: Entries are Random-Effects Logit coefficients (heteroscedasticity robust standard errors clustered by country in parentheses). Pseudo-R^2 corresponds to standard logistic model with equivalent specification. *** indicates statistical significance at 1% confidence level, ** at 5% confidence level, and * at 10% confidence interval.*

Table 8.4 Marginal effects of covariates at their means according to the Delta Method

VARIABLES	Predicted probabilities (Model 2) Level of GDP per capita	Predicted probabilities (Model 3) Squared GDP per capita	Predicted probabilities (Model 4) Logged GDP per capita
Polity2 (t-1)	-0.00716***	-0.00781***	-0.00727***
	(0.00172)	(0.00178)	(0.00173)
Per Capita GDP (t-1)	-1.09e-07	-2.83e-05	
	(8.75e-06)	(2.18e-05)	
Squared Per Capita GDP (t-1)		2.53e-09***	
		(0)	
Economic Growth (ln, t-1)	-0.728***	-0.719***	-0.717***
	(0.203)	(0.201)	(0.202)
Life Expectancy (t-1)	-0.00137	-0.000819	-0.00118
	(0.00234)	(0.00234)	(0.00234)
Urban Population (t-1)	-0.000562	-0.000545	-0.000379
	(0.00110)	(0.00111)	(0.00106)
Primary School Enrolment (t-1)	1.36e-06	2.43e-06	1.52e-06
	(2.29e-06)	(2.39e-06)	(2.31e-06)
Fuel Exports (ln, t-1)	-0.000817	-0.000780	-0.000752
	(0.000626)	(0.000606)	(0.000622)
Per Capita GDP (ln, t-1)			-0.0123
			(0.0345)
Observations	588	588	588

*NOTE: Based on logit model 2, 3 and 4. The covariates are set at their means. Marginal effects at the means present the impact of the covariates at their means on the probabilities of democratization. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1*