

## THE POTENTIAL IMPACT OF REGIONAL BEYOND GDP INDICATORS ON ELECTIONS

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### **Abstract**

Beyond GDP approach has become a milestone for the efforts that try to integrate social indicators to the studies that were previously tracing traditional macro-economic indicators like GDP, inflation and unemployment. It not only paved the way for novel indicators but also stimulated the establishment of new multi-dimensional indexes. The recently published European Union Regional Social Progress Index defines itself within this scope and aims to measure the regional social progress as a complement to traditional measures of economic progress. Our study gets the inspiration from this new index. The construct of the study is built upon the question whether non-economic regional indicators, particularly social, are capable of explaining the support for the incumbent in elections. This is one of the first studies integrating Beyond GDP approach to election studies by using the social indicator sets. It analyzes the impact of the social indicators on incumbent party votes for all of the 81 cities in the 2011 Turkish general elections. Our findings depict that social indicators affect the votes for incumbent as powerful as economic ones.

**Keywords:** Beyond GDP, Regional Social Indicators, Regional Social Progress Indicators, Elections, Incumbent Party, Turkey

**JEL classification:** R5, R11

### **1. Introduction**

The study that establishes the current foundations of Beyond GDP approach is Stiglitz, Sen and Fitoussi Report (Stiglitz et al., 2009). The report develops a discussion on the aggregate GDP data and proposes a new approach to capture what is really important for common people's well-being (Stiglitz et al. 2009). Beyond GDP foresees the limits of GDP as an indicator of social progress and paves the way for sophisticated efforts to reflect the real dynamics of growth. In the scope of Beyond GDP studies, regional development emerges as a favorable and novel indicator set as it is considered as the central objective of national economic policy. Beyond GDP approach proceeds from the belief that simply measuring economic output offers too little insight into regional performance and extends the boundaries to include non-economic dimensions such as social progress. The recently published European Union Regional Social Progress Index derives from this context and aims to measure the regional social progress as a complement to traditional measures of economic progress. The Index contributes to the Beyond GDP debate by proposing a solid metric to complement GDP rather than to replace it (Europa, 2016). It presents a region's strengths and

weaknesses on a relative rather than absolute basis, comparing a region's performance to that of its economic peers (European Commission, 2016:7)

The contributions of this new index may not be limited with the given targets. It also provides a new regional data set for election studies stimulated with the question of what affects the voters' support for the incumbent party. Elections offer an interesting case study to observe the impact of the improvements in well-being on the political choice of citizens. The factors impacting the voting decision of the electorate has been of significant interest in the literature. Vast number of studies focus on the impact of economic indicators on the choice of the electorate. These mainstream models of voting provide a generic economic performance approach and frequently use panel data of macro-economic indicators like GDP growth rates, unemployment, and inflation as the basic determinants of voters' choices (Wilkin et al., 1997; Chappel and Veiga, 2000; Nadeau and Lewis-Beck, 2001; Van der Brug et al., 2007; Duch and Stevenson, 2008; Belanger and Gelineau, 2010; Palmer and Whitten, 2011; Singer 2011; Lewis-Beck and Nadeau, 2012; Dassonville and Lewis-Beck, 2013; Alt et al., 2014; Ansolobehere et al., 2014). This approach neglects the social conditions affecting the voters' choice and therefore may remain insufficient to identify the transformative forces that affect the electorate. Recent literature highlights this and points the need for a multi dimensional analysis such as including social factors (Kanji and Tannahill 2013, Reeves and Gimpel 2012, Stevenson and Duch, 2013, Ansolbehere et al., 2014).

Based on these two novel discussions, the emergence of regional social progress indicators in the scope of Beyond GDP approach and the need to include social conditions to the election studies; we argue that extending election analysis to include Beyond GDP approach can be noteworthy. Beyond GDP approach derives from the need to rethink the criteria for measuring the welfare as there is an increasing gap between the information contained in aggregate GDP data and what is really important for common people's well-being (Stiglitz et al., 2009). The evolution and the scope of Beyond GDP approach corresponds to the quest in election studies with regard to the development and further improvement of indicators that adjust and complement the traditional ones namely GDP, inflation and unemployment. It has long been clear that the traditional indicators, mainly GDP, are considered as inadequate metric to gauge well-being over time particularly in its economic and social dimensions (Stiglitz et al., 2009:8).

To our best knowledge it is one of the first studies that integrates Beyond GDP approach to election studies by defining novel social indicators related to regional progress in order to explain the support for the incumbent party in elections. Thus, the study aims to provide an innovative outlook to regional election studies. It aims to identify the impact of regional social progress indicators on voting for the incumbent. The set of regional social progress indicators are selected in line with the new European Union Social Progress Index. The impact of the regional social progress indicators on the incumbent party votes are analyzed statistically for all of the 81 cities in 2011 Turkish general elections. Our findings depict that social progress indicators explain the voters' choice for incumbent as strong as the economic indicators.

The paper proceeds with a conceptual discussion on Beyond GDP, regional social progress and elections. The next section provides data, methodology and empirical results. Conclusion includes discussion on the findings and provides policy recommendations for future elections emphasizing the potential role of regional social progress in election results.

### **Conceptual Discussion on Beyond GDP, Regional Social Progress and Elections**

Beyond GDP approach takes its roots from some of the most respected economists of the 20th century that contribute to the discussions on the imperfections of GDP (two articles by Antal and Van den Bergh (2014) and Van den Bergh (2009) provide a detailed list of the literature on the alternatives to GDP; including Kuznets (1941); Hicks (1948); Galbraith (1958); Samuelson (1961); Mishan (1967); Nordhaus and Tobin (1972); Easterlin (1974); Hirsch (1976); Sen (1976); Scitovsky (1976); Daly (1977); Frank (1985, 2004); Hartwick (1990); Tinbergen and Hueting (1992); Arrow et al. (1995); Vellinga and Withagen (1996); Weitzman and Löfgren (1997); Dasgupta and Mäler (2000); Dasgupta (2001); Ng (2003); Kahneman et al., (2004); Layard (2005); Fleurbaey (2009) and Victor (2010)). However, the most reputable study that establishes the current foundations of Beyond GDP approach is

Stiglitz, Sen and Fitoussi Report (Stiglitz et al., 2009). The Report is motivated with the idea that there is an increasing gap between the information contained in aggregate GDP data and what is really important for common people's well-being (Stiglitz et al. 2009). It identifies the limits of GDP as an indicator of economic performance and social progress and paves the way for sophisticated efforts to capture the real dynamics of growth. Anand et al., (2013) distinguishes the patterns of studies that tend to explain well-being under the scope of Beyond GDP under five characteristics. Those studies are naturally multidimensional, covering nearly-all economic, social and sustainable growth indicators. They involve tailor-made subjective indicators for citizen satisfaction such as happiness index. They try to measure distribution of well-being in the society. They focus on the opportunities provided by the market and lastly they seek to measure income by utilizing more direct and comprehensive indicators of progress. Beyond GDP studies results in establishment of alternative indicator sets (Bandura, 2008; Costanza et al., 2009; Bleys, 2012; Fleubaey, 2009; Boarini and D'Ercole, 2013; Kubiszewski et al., 2013; Smith et al., 2013; Stern et al., 2014) aiming at achieving a better interpretation of well-being. Bleys (2012) provides a classification for the alternative measures of the Beyond GDP. He proposes three categories of indicators that form the basis of emerging indexes. Accordingly, indicators adjusting GDP target including monetized environmental and social factors whereas indicators replacing GDP try to assess well-being more directly than GDP, for instance by assessing average life satisfaction or the achievement of basic human functions like Human Development Index, Ecological Footprint, Happy Planet Index, Environmental Sustainability Index. Indicators supplementing GDP complement GDP with additional information on the environment and social conditions, either by the creation of satellite accounts or by relating GDP to other social and environmental indicators.

The reflections of Beyond GDP at the regional level may be traced in different versions of global indexes bearing regionally designed tools. OECD has developed two regional statistical databases; OCED Regional Database and OECD Metropolitan Database. Both of these databases include social and economic indicators. OECD Regional Well-being is introduced with the aim of understanding people's level of well-being and its social determinants to advance the measurement of indicators at the regional level. None of these regional indexes solely focus on social indicators even though there is an increasing tendency to have a special focus on social progress and its positive spill-over effects on regional well-being. Social Progress Index (SPI) which is a multi-dimensional index, developed by Michael Porter in 2014 includes a set of social and environmental indicators without an economic dimension. However, it lacks the regional focus, only providing a national level data.

The need for a regional social progress index is strongly marked by the European Union Committee of the Regions in 2010 (European Parliament Briefing, 2016:9). The findings of a survey conducted among local and regional authorities to learn about their views and experiences with 'Beyond GDP' indicators showed that the majority of contributors considered GDP insufficient to capture broader social and economic aspects of regional development and supported the development of additional comparable indicators, taking better account of regional characteristics. In 2016, European Union Index on Social Progress is published with the aims of covering this gap, establishing a total social outlook with particular region-level coverage. The Directorate-General for Regional and Urban Policy of the European Commission, the Social Progress Imperative and Orkestra – Basque Institute of Competitiveness developed a pilot regional version of the Regional Social Progress Index for Europe.

These promising indexes outline the social dimensions of regional progress and can be used as instruments of assessment. For Beyond GDP studies, it is significantly important to determine the regional progress through the employment of social indicators. However, it is also possible to utilize it as a tool to test the impact of regional social progress indicators on regional well-being, as perceived by the citizens. At this point, integration of the discussion on elections to Beyond GDP approach may be of interest due to the fact that decision to vote for the incumbent party is heavily dependent on well-being of citizens. Research on election results have been solely based upon the economic performance of the incumbent party. So a vast amount of literature covers studies on the relationship between economic performance and election results. Along with the developments on Beyond GDP approach, there appeared

a tendency and a need to explain election results by using non-economic indicators as well as economic ones. A more comprehensive definition of regional well being which encompasses factors such as social progress besides economic is developed by regional studies related to elections. It is expected that voters that are better off in terms of social progress indicators tend to award incumbent. Hunter and Power (2008) provide that the provision of material benefits to the voters by employing government investment in social policy that would end up with a societal change, mobilizes the votes for the incumbent. Prosperity and well-being appear to be influential factors for electoral support towards the incumbent. Johnston and Pattie (2001) show that prosperity of the local area influences voting behavior more than changes in the personal financial situation. Reeves and Gimpel (2012) find that housing market, inflationary gasoline prices, and accumulating home foreclosures have impact on voters' choice.

### **Research Methodology**

The objective of this research is to demonstrate through an empirical study that the regional social progress can also be as important as the economic progress in shaping the election results. The study employs city level data as the indicators of regional progress.

Methodology is based on the analysis of the statistical relationship between city performance and the incumbent party votes in a city. City performance is covered in two dimensions; social and economic. The economic performance is related to physical infrastructure, transportation, ICT, industrial input advantages, market advantages, labor quality, investment coherence whereas the social performance is composed of dimensions related to social services infrastructure, health, education, cultural activities and safety. Although the major objective of the study is to analyze the impact of social progress indicators on the incumbent party election results; it is preferred to test both economic and social progress indicators with regard to their relative comparative impacts on elections.

Data is acquired from the Report on the Sustainability of Turkish cities (Türkiyenin Şehirleri Sürdürülebilirlik Araştırması, 2011). The report aims to reflect the relative success of the cities in Turkey through dimensions such as economic performance and social performance. Methodology of the report involves the development of an index for each dimension utilizing the sub-indicators listed in Table 1.

**Table 1. Economic and social performance indicators**

<b>Economic performance</b>	<b>Economic performance sub-indicators</b>
Physical infrastructure	Commercial vehicle per person; railway ; airport; harbor; ICT infrastructure( telephone ownership, internet access)
Access to domestic/ international markets	Export volume per person; free zone commerce; proximity to international markets; domestic market potential
Labor market	Active labor force ratio
Economic activity	Active participation in labor force; new business openings; gross salary per person; new constructions; agricultural production per person; industry electric consumption per person; number of hotels; number of beds in touristic sites
Labor capital	Private sector daily earnings; literacy rate; average number of school years completed; university graduation rate
Banking and financial services	Number of bank branches per person; total bank credits per person; total bank accounts per person
Research & Development	R&D funding for academia; R&D funding provided for firms
<b>Social performance</b>	<b>Social performance sub-indicators</b>
Social fragilization	Poverty ratio; illiteracy ratio; ratio of people not protected under social security
Health	Number of doctors; number of hospital beds; ratio of people protected under social security
Culture	Newspaper sales; museum visits; theater tickets; movie tickets
Shelter infrastructure	Ratio of water and sanitation service provided
Safety	Crime rate
Education	Female participation rate in primary education; student/teacher ratio in primary education; student/teacher ratio in secondary education; ratio of university students

## **Hypotheses and Data**

Two hypotheses are constructed for this study as presented below.

- Hypothesis 1: City social performance has a positive impact on the change in the percentage of votes gained by the incumbent party between 2007 and 2011 elections.
- Hypothesis 2: City economic performance has a positive impact on the change in the percentage of votes gained by the incumbent party between 2007 and 2011 elections.

The dependent variable for both hypotheses is the change in the percentage of votes gained by the incumbent party at each city between 2007 and 2011 national elections. The dependent variable is defined as the change in percentage of votes gained by the incumbent party at each of the 81 cities in Turkey.

**Table 2: Regression Results of Hypothesis 1**

Model 1	R-Square	ANOVA
	0,374	F=47,251 (p<0,000*)
Coefficient	Beta	t-test
	0,788	t=6,874 (p<0,000*)
Independent Variable: Social Performance		
* Significant at the 0,01 level		

In Model 1, regression analysis is applied to test Hypothesis 1. Table 2 provides a summary of the results of the regression model. Results show that the model is meaningful (p<0,000); therefore, Hypothesis 1 is supported and it is accepted. This implies that social performance level of each city has an impact on the change in the percentage of votes gained by the incumbent party. In addition, the beta coefficient of social performance is statistically meaningful at 1% significance level where t value of coefficient is considerably high (t=6,874). Overall, social performance variable explains 37,4% of total variance alone, which is noticeably a high value.

**Table 3: Regression Results of Hypothesis 2**

Model 2	R-Square	ANOVA
	0,297	F=33,408 (p<0,000*)
Coefficient	Beta	t-test
	0,6	t=5,780 (p<0,000*)
Independent Variable: Economic Performance		
* Significant at the 0,01 level		

In Model 2, regression analysis is applied to test Hypothesis 2. Table 2 provides a summary of the results of the regression model. Results show that the model is meaningful (p<0,000); therefore, Hypothesis 2 is supported and it is accepted. This implies that economic performance score of each city has an impact on the change in the percentage of votes gained by the incumbent party at each city. The beta coefficient of economic performance is statistically meaningful at 1% significance level and t value of coefficient is considerably high (t=5,780). Overall, economic performance variable explains a considerable part of the total variance (29,7%).

Both of our models indicate that economic performance and social performance are noteworthy in explaining the vote for the incumbent. The majority of the election studies emphasize the significant impact of economic performance on the elections as supported by our study. Furthermore this study puts forward the significant impact of social performance with a high explanation ratio of 37.4%. So, the major contribution of our study derives from its ability to integrate Beyond GDP indicators of social performance in election analysis, showing the potential impact of social indicators in increasing the votes for the incumbent.

## **Conclusion**

In our study, we examine the relationship between regional social indicators and the support for incumbent party. Our inspiration derives from the Beyond GDP approach which provides the basis for efforts to expand the studies towards non-economic parameters. Even though economic performance is the traditionally preferred indicator in explaining election results, our study provides an extended outlook where the social indicators bear a considerably high impact in election results.

This study contributes to the literature in two ways; first, by integrating Beyond GDP indicators, particularly regional social progress indicators to election studies and secondly by covering the assessment of the city-wise variances in incumbent party analysis. Our findings show that regional social indicators bear a high ratio of 37.4%, meaning that advancing regional social performance, may have an impact of nearly 40% in voters' support for incumbent. So, the major contribution of our study may be marked as its ability to integrate Beyond GDP indicators of social performance in election analysis, showing the potential impact of social indicators in increasing the votes for the incumbent.

The findings of this study highlight the importance of regional social conditions in elections. It may also provide an insight for political parties and politicians. Increasing the emphasis on regional social progress may increase the support for the incumbent. This may be included in election campaign designs. Depiction of regional social progress as one of the major determinants of voting for incumbent, may lead to an increasing the role of social promises in election manifestos, bringing into sight the actual contribution of social policies to the votes earned.

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