EARNINGS QUALITY VERSUS ACCOUNTING REGULATION. EMPIRICAL ASSESMENT ON ACCURACY OF MACROECONOMIC ESTIMATES

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ABSTRACT

On the light of recent economic crisis and increasing uncertainty on macroeconomic systems, public policies have to be properly defined, implemented and continuously monitored. Economic growth estimates are essential on budgetary projection, as the basis for financing all public policies. Our study consists of an empirical assessment of the impact of earnings quality on the accuracy of economic growth estimates. In order to asses isolated direct and indirect effects of earnings quality and quality of accounting regulation, we proceed to a path analysis. The main results reveal that quality of the accounting regulation is not sufficient to ensure a significant increase on earnings quality. However, perceived high quality of accounting regulation imply a positive marginal impact on the accuracy of economic growth estimates. In spite of those results, seem earnings quality determine a marginal decrease in the accuracy of economic growth.

KEYWORDS: *economic growth, earnings quality, path analysis, SARS.*

1. INTRODUCTION

Up-to-date wide range of research papers have addressed essential topics related to quality of information disclosed either by statutory financial statements, or by different other corporate financial and non-financial report, predefined through a more flexible reporting framework, as the more recent sustainability reporting, or the integrated reporting. No matter the framework used along the financial reporting supply chain, information disclosed is required to be relevant and represent faithfully financial position and financial performance of reporting entities. However, the concept of earnings quality quite ambiguous as it depends on users' objectives (Cohen et al., 2004; Dechow et al., 2010). As different groups of users of financial information have most of the time conflicting objectives, the mission to define the quality of financial statements become even more difficult (Sunder, 2016). The economics behind financial statements and accounting regulation, the role of culture on financial reporting configuration, or the non-compliance costs, either related to corporate governance mechanism or state enforcement, sum-up the motivation for earnings management.

On these circumstances, it is essential to understand the causal relation between macroeconomic estimates and quality of financial statements. This relation is best, described by the income approach used to calculate GDP, which underline the role of the operating income on the equation of GDP. Until now there has been little interest paid on the impact of financial statements quality on the accuracy of macroeconomic estimates. There are studies that underline the decline in value relevance of the financial information, especially concerning financial performance (Dichev & Tang, 2008; Hail, 2013; Lev, 2018). Overall, those studies underline the fact that the objective of

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stewardship become more and more important, while the objective of valuation of the financial statements become less important. Consequently, the predictability of financial information is affected negatively, with implications on the equation used to forecast GDP level.
In spite of those results, there are more recent studies that show financial statements are still useful on forecasting macroeconomic aggregates, such as Konchichki & Patatoukas (2013), Nallareddy & Ogneva (2017), Abdalla & Carabias (2017), Lechien (2017), Park et al. (2018), Gaertner et al. (2019), or Patatoukas (2020) that underline the role of financial statements in economic growth estimation. There are also studies that emphasize the value relevance of financial statements on unemployment rate estimation, such as Kalay et al. (2014).
However, we have to underline the fact that those articles have focused on analyzing the value relevance of financial statements on the projection of macroeconomic estimates, without looking on the role of the accounting and auditing regulation. As Dichev et al. (2013) underlined, standard setting has a first-order effect on the utility of earnings. After all, the framework for accounting practice is, or should be the accounting regulation. On this area, only Friedman (2015), Lazarov et al. (2017) and Tiron-Tudor & Achim (2019) have brought some insights.
The main purpose of our study is to assess the marginal effect of the quality of financial statements and the quality of accounting regulation on the economic growth estimates precision. As GDP growth estimates depend on a long list of economic, social, regulatory and political drivers, we want to integrate firm-specific earnings quality information and strength of accounting and auditing regulation in a complex model of path analysis, along with macroeconomic context vector of variables. This way we analyze the role of accounting regulation on estimating economic growth. Is there a direct or indirect significant effect of the strength of accounting and auditing regulation on the macroeconomic estimates? Are earnings quality positively affected by a stronger accounting and auditing regulation framework? Is macroeconomic context facilitating the increase of earnings quality through a strong accounting and auditing regulation framework? All those questions are to be replied through the path analysis we performed, providing us useful information about the complexity of the causal relations between macroeconomic drivers, national accounting framework, accounting practice and macroeconomic aggregates.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Macroeconomic estimation models are designed to use either information provided through regular statistical surveys within companies, or information disclosed through financial statements (EU Regulation, 2013). Constrained by the degree of standardization of financial statements content and format, the level of digitalizing financial statements and the access national accounts experts have to the database of all financial information disclosed by companies, the methodology of compilation of national accounts as directly affected by financial statements quality.
However, there are studies that underline the decline in quality of financial statements, revealing the trend that strengthen the objective of stewardship of the financial statements (Dichev & Tang, 2008; Hail, 2013; Lev, 2018). The decline seems to be even more prominent on the financial performance level, mainly because of the use of earnings management techniques, as managers want to get advantage of incentives generated by capital markets (Kothari, 2001; Dechow et al., 2010; Leuz & Wysocki, 2016).
The use of earnings management techniques seems to be a systematic issue, most probably as a consequence of an accounting regulation not sufficiently connected to the economic reality and insufficient or ineffective enforcement controls designed to ensure an acceptable level of compliance of accounting and financial reporting practice. Studies such as of Graham et al. (2006) underline the negative effects of earnings management practice, which seem to be used by top management as long as there are identified ways to manipulate financial information complying

with legal requirements, no matter the potential of long-term economic growth of a company is sacrificed. In the end, even managers admit they proceed to earnings management, in order to ensure a long-term stability of earnings and a proper correlation with cash flows (Dichev et al., 2013). On those circumstances, managers' freedom on decision-making has been limited through debt-contracting techniques that establish constraints on firms' strategic decisions, monitored through different balance-sheet-based covenants, or financial performance covenants, with implications on firms' risk profile and cost of financing (Christensen & Nikolaev, 2012).

In spite of this overall picture concerning quality of financial statements, more recent studies have assessed the causal relation between macroeconomic estimates accuracy and earnings quality.

Konchichki & Patatoukas (2013) are pioneers on this research area, emphasizing the value relevance of aggregate accounting earnings growth in the prediction of growth in nominal GDP. However, the study underline the fact that financial information is not fully incorporated into the macroeconomic estimates, as only financial information revealed within 1-2 quarters in advance seem to be relevant in macroeconomic prediction models. Similar finding was confirmed on studies such as Lechien (2017) or Park et al. (2018).

A root cause might be the accounting conservatism of the financial information disclosed, that can deter value relevance of financial information generating a discretionary lag of time for positive earnings reported, with impact on GDP growth estimates that does not incorporate financial information timely (Hann et al., 2012; Do & Nabar, 2018; Gartner et al., 2019). Another consequence is the calendar of financial reporting itself, as it does not fit to the calendar of macroeconomic estimates projection. Together with the conditional conservatism and the fact that analysts use alternative sources of information, even if they are only estimates, this lag in time between the two calendars generate late integration of financial information into macroeconomic estimates and with lower power of predictability (Konchichki & Patatoukas, 2013; Lalwani & Chakraborty, 2020).

Those results determined researchers to overcome this issue. Alternative solution for traditional economic growth forecast seem to be the now-casting models (Chen & Ranciere, 2016; Abdalla & Carabias, 2017; Park et al., 2018; Ferrera & Simoni, 2019). With help of those models and together with information technologies related to web data collection and data mining techniques, macroeconomic estimates can be made with higher precision, on a short-term base. However, it has to be underlined the fact that short-term estimates can be significantly biased by irrational behavior of investors, as on short-term most of information is related to analysts estimates and management corporate interim financial disclosures, which are not subject of audit certification.

Another root cause is highlighted by Konchichki & Patatoukas (2013) that brings to our attention the fact that financial information is only partially integrated in macroeconomic estimates of GDP growth because analysts prefer to use information that is oriented to the capital market evolutions, sacrificing aspects disclosed by financial statements related to economic substance of firms' operations. Hence, the impact of earnings quality, significantly driven by capital-markets incentives, amplifies the negative effect of low earnings quality into the macroeconomic estimates errors.

As macroeconomic estimates origin is the national accounts system, similar to firms' accounting system in many aspects, including the use of accruals accounting, the studies revealed that cash-flow information is less value relevant in macroeconomic estimates projection than accruals accounting information (Konchichki & Patatoukas, 2013; Park et al., 2018). In the end, information related to cash flows has a higher level of variation along the time, which translate into higher standard deviations and lower consistency of the prediction models.

Because of using aggregate earnings, value relevance of financial information decrease drastically in case of selection of homogenous sample of firms, which did not report extraordinary items. Indeed, as Gaertner et al. (2012) and Ball & Sadka (2015) have underlined, the aggregation of

earnings reported lead to a compensation effect, which could deter the value relevance of financial statements to provide insightful information related to prediction on economic growth. Hence, studies like Nallareddy & Ogneva (2017), Carabias (2017), or Gaertner et al. (2019) have demonstrated financial information become more relevant for macroeconomic GDP growth estimates as long as it reflect high variance in earnings reported, providing clues about potential future economic shocks. Moreover, seem that revised macroeconomic estimates related to economic growth have a higher correlation with the variance of earnings reported than with the mean of earnings reported (Nallareddy & Ogneva, 2017). Thus, the error of macroeconomic estimation is correlated with the variance on earnings reported, while the mean of earnings reported is correlated with the economic estimation.

Consequently, we consider for testing the following hypothesis:

H_1: *earnings quality generate a positive impact on macroeconomic estimates precision*.

Related to the impact of IFRS adoption on the accuracy of macroeconomic estimates, the literature does not provide unanimous conclusion. There are studies that confirmed through various empirical studies that IFRS adoption can lead to increase in quality of earnings reported (De George, 2016). Similar results are obtained by Park et al. (2018) that confirm IFRS adoption generate a significant increase of earnings quality on the precision of macroeconomic estimates. However, Huang (2015) could not confirm a significant causal relation between earnings quality and macroeconomic estimates accuracy. Seem there is little interest of researchers on this area, because of design issue to isolate the effect of IFRS adoption on the evolution of macroeconomic estimates accuracy.

Still the results reflecting effect of IFRS adoption on earnings quality are conditioned by enforcement mechanisms effectiveness (Christensen et al., 2013; Barth & Israeli, 2013) or economic incentives (Daske et al., 2008; Armstrong et al., 2010; Daske et al., 2013; Christensen et al., 2015). IFRS adoption has not solved the problem of accounting differences, neither on national level, nor on international level. Nobes (2015) has illustrated how the overt, covert and measurement options, allowed by IFRS as a political compromise, determine still wide spread of accounting practice, because of political factor, cultural dimension and economic and reputational managers' objectives.

There are studies that ask for research to study marginal effect of accounting regulation on macroeconomic output, as there is lack of such studies (Leuz & Wysocki, 2016). IFRS adoption was a good exercise to isolate the impact of accounting regulation from other factors, such tax regulation, corporate governance, enforcement framework, or cultural dimension (DeGeorge, 2016). Such study is of Christensen et al. (2015) that underline the fact that reporting incentives dominate accounting standards in determining accounting quality, especially in case of voluntary adoption of IFRS. The equation become even more complicated if we consider the nature of the standard-setting process, which is highly impacted by the political factor and cultural dimension of financial reporting.

However, it is essential to understand if accounting regulation at least facilitate the increase in earnings reported and if the indirect effect on macroeconomic estimates accuracy is significant or not. Currently there are few studies assessing the macroeconomic output of high-quality accounting standards. As the quality of accounting standards is a latent characteristic that cannot be directly measured, Friedman (2015) and Lazarov et al. (2017) have studies how the perception on the strength of accounting and auditing regulation generate effects on capital markets level and economic growth. Both studies have achieved to confirm a positive correlation between the evolutions of capital markets and the perception on the strength of accounting and auditing regulation. More exactly, the results reveal that higher perception on the strength of accounting and auditing standards, is related to higher market value for companies reporting in compliance with those accounting and auditing standards. Moreover, Tiron-Tudor & Achim (2019) have confirmed a

significant role of higher perception on the strength of accounting and auditing standards on capital markets price synchronicity.

In spite of expected indirect effect of accounting standards on the evolutions of capital markets, Friedman (2015) and Lazarov et al. (2012) as well have underlined that the marginal effect of SARS score (strength on auditing and reporting standards) is higher than the one related to GDP, leading to the conclusion that quality of accounting and auditing standards is at least as important as the level of economic development. On the other side, Tiron-Tudor & Achim (2019) obtain contradictory results related to SARS score, as price synchronicity in the market is mainly ensured by an institutional framework supported only by a highly developed economy.

Consequently, we consider for testing the following hypothesis:

H2: *perceived quality of accounting and auditing standards influence positively macroeconomic estimates precision.*

However, as revealed by Christensen et al. (2013) and Barth & Israeli (2013), the benefits of high-quality accounting regulation are conditioned by the effectiveness of the enforcement framework. Further, Lazarov et al. (2017) highlight the role of the effectiveness of firm level corporate governance mechanisms, which are perceived as complementary tools to facilitate the positive premises on earnings quality generated by high quality accounting standards.

On those circumstances, it is essential to capture in our analysis, not only the role of accounting regulation on the precision of macroeconomic estimates, or the impact of quality of earnings reported, but also the influence of a wider range of factor such as:

- macroeconomic context;
- nature of the standard-setting process and influence of political factor;
- the cultural dimension on financial reporting;
- effectiveness of enforcement framework.

3. METHODOLOGY RESEARCH

Our research paper starts from several open questions raised by Leuz & Wysocki (2016) that highlight there is not sufficient focus on the research of the outcomes of disclosure and reporting regulation. Ball (2008) underline the fact that there is no yet clear which is the leading factor that influence significantly financial reporting practice. Is it capital market that has a dominant effect on financial reporting practice, or the accounting regulation that is affected by the political factor inferences? Is there a link between accounting regulation and economic growth? Alternatively, accounting regulation ensure only the premises of better quality of earnings reported, that translate into better macroeconomic estimates precision? How macroeconomic context, the nature of standard-setting process or cultural dimension relate to accounting regulation, or the accuracy of macroeconomic estimates concerning economic growth? All these questions capture a complex network of causal relations defining the framework that help us to describe the influence of quality of financial statements on the macroeconomic estimates precision. This is the reason why we proceed to a path analysis, in order to describe the conceptualization of the complex causal relations between all those elements.

Compared to the traditional regression analysis that give each variable considered in the model the same ontological position towards the dependent variable, path analysis is an extension that allow a hierarchical ordering of the variables, based on the direct or indirect effect they have on the dependent variable (Rotariu et al., 2006). Path analysis support researchers to overcome the weaknesses implied by *Ceateris Paribus* assumption, that does not provide all the time consistent evidence related to causal relations between elements composing a complex system. Using this model help researcher as well to solve partially the problem of endogeneitiy, as path models capture not only the relation between final dependent variable, but also the relations between independent variables as well through simple linear regression equations.

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