STUDIA UNIVERSITATIS
BABEŞ-BOLYAI

OECONOMICA

3/2015

STUDIA

UNIVERSITATIS BABEŞ-BOLYAI

OECONOMICA

3/2015

December

EDITORIAL OFFICE OF OECONOMICA: Teodor Mihali str. no. 58-60, s. 251, 418655 Cluj-Napoca,
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YEAR	**(Volume 60) 2015**
MONTH	**DECEMBER**
ISSUE	**3**

Studia Universitatis Babeş-Bolyai Oeconomica

3

EDITORIAL OFFICE of **Studia Universitatis Babeş-Bolyai Oeconomica**
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STUDIA UNIVERSITATIS BABEȘ-BOLYAI OECONOMICA, VOLUME 60, ISSUE 3, 2015

CHALLENGING THE CAPITALS: AN INVESTIGATION OF THE CONCEPT OF CAPITALS IN THE <IR> FRAMEWORK

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Abstract. This paper investigates the concept of ‘capitals’, as used in the IIRC conceptual framework, and their application in practice. We discuss the various concepts and definitions presented by the IASB, IPSASB, and IIRC conceptual frameworks. Afterwards, we undertake a case study approach, by analysing some published ‘integrated reports’ against a standard checklist. The paper is exploratory, as it analyzes the capitals from the viewpoint of four front-running companies from the IIRC database. The findings show that the requirements of the Framework are inherently followed in the reporting practice by the entities, but the level of real information disclosure is questionable. The analyzed entities prioritize the capitals (as a fundamental concept of integrated reporting), but they sometimes have different interpretations. Therefore, another doubt is if the framework is sufficiently explicit.

JEL Classification: M40, M48, M49

Keywords: IIRC, capitals, framework, disclosure.

1. Introduction

The International Integrated Reporting Council published its definitive conceptual framework in December 2013 (IIRC, 2013). The early ideas from the inception of the Council in 2010 (Alexander, 2015; Flower, 2015) which related significantly to sustainability, have virtually disappeared in the final 2013 version. They have been replaced by the notion of capitals, but more precisely by the way of how an entity ‘adds value’ to them. We do not repeat this exposition, but we investigate the six capitals defined by the IIRC, the declared objective of three

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conceptual frameworks (IASB, IPSASB, IIRC). Furthermore, we discuss the extent to which they appear to be different as regards their declared objectives, and as regards the likely differences in the focus of practical application which each one suggests.

The major purpose of the paper is to emphasize the practical application of the IIRC requirements regarding ‘capitals’, by showing what entities are reporting about their ‘use of and effects on’ the capitals.

In this respect, we provide a theoretical basis, both as regards the notion of, requirements for and objectives of, reporting thereon, and as regards our creating a structure for our empirical investigations. Afterwards, we present detailed results of the case studies investigated so far. A preliminary discussion and conclusions and notes on further proposed developments conclude the paper.

2. Some theoretical underpinnings

As outlined in the introduction, this paper investigates the IIRC notion of capitals, with both theoretical analysis and an empirical investigation, through a selection of in-depth case studies, of what entities are reporting about it. An explicit subsidiary theme is to explore what differences appear (if any) between private sector entities and public sector entities. This section sets out to provide the theoretical framework to address our research questions, summarised as:

1) Which is the general perception provided by the IIRC Framework regarding the presentation of 'the capitals'?

2) Does the IIRC intend that the users and reporting entities take these ideas concerning the capital seriously?

3) What do entities report, and does this reporting suggest that entities do in fact take the capitals seriously?

4) What differences seem likely to emerge between private sector entities and public sector entities?

To approach these questions from a theoretical perspective, we need to explore the relevant parts of three conceptual frameworks, the IIRC, the IASB, and the IPSASB. Rather than compartmentalise our investigation, our presentation presents the three Frameworks in what we regard as a logical sequence and then addresses the inter-relationships directly informing our focus. We consider IASB, IPSASB, and IIRC, in that order. Intuitively, each should be expected to be more broadly-based in focus, and the users it targets, than the previous one. Thus, we are able to address the twin aspects of firstly what the capitals are and how they are perceived, and secondly, eventually, of private/public sector entity differences. So we begin with the IASB Conceptual Framework.

The key issue for our purposes is to consider the users, the ‘customers’, of the financial statements envisaged by the IASB. The Board says, (IASB, 2010 para OB 2):

> ‘The objective of general purpose financial reporting (GPFR) is to provide financial information about the reporting entity which is useful to existing and potential investors, lenders, and other creditors in making decisions about providing resources to the entity...’,

and continues (para OB 10):

> ‘...other parties, such as regulators and members of the public other than investors, lenders and other creditors, may also find GPFRs useful. However those reports are not primarily directed to these other groups’.

This is surely unequivocal. We are talking about financial (and only financial) information for suppliers of finance. Further (para OB 3):

> ‘Existing and potential investors, lenders and other creditors need information to help them assess the prospects for future net cash inflows to an entity’.

The IPSASB issued its full and final conceptual framework document on 2 November 2014 (IPSASB 2014). The broad references regarding the information published in the general purpose financial reports (GPFR) do not include restrictiveness. More precisely, it is significant that the final sentence refers to ‘information that enhances…’, and not to ‘financial information that enhances…’ (IPSASB, 2014, para 1.6). The IPSASB framework addresses to a larger audience than the IASB. Comparing the IPSASB Framework with the IASB Framework, the public sector one has very much wider users, in effect ‘the citizenry’. But the extent to which it recognises information needs beyond ‘the financial’ seems distinctly limited.

Our final Conceptual Framework for consideration is the International Integrated Reporting Council one (IIRC 2013), issued in December 2013. We do not give here details of its (fascinating) gestation (see for example Flower, 2015 and Alexander, 2015), and focus only on its definitive position. An integrated report (paras. 2.2 and 2.3) ‘explains how an organization creates value over time. Value is not created by or within an organization alone.’ The value is created by the company with the help of the six capitals: human, natural, manufactured, financial, intellectual and social and relationship.

This sounds broader and wider in scope to the tune of a whole new dimension. The obvious and vital question, however, is: value 'of what for whom'? This requires a detailed analysis of the six capitals and the relationships between them.

It is worth noting the similarity of wording with the IASB Framework para OB 2 '... information that is useful to existing and potential investors, lenders and other creditors...' discussed above. The key customer of the IIRC is identical to the key customer of the IASB. This does not seem to be a brave new world.

It seems reasonable to conclude on the evidence given so far that for all the frameworks considered, the focus, in the end, is firmly on investors, lenders, and the suppliers of finance. Reporting always becomes about information for the investment decision.

But we should consider the six capitals a little further. There are several possible outcomes from the existence and recognition of multiple capitals. As accounting theorists, we should all be well familiar with the concept of capital maintenance. But what about capitals maintenance? Do we need, as our 'maintenance' objective, to maintain each and all of the six capitals considered individually? Or do we need, as our maintenance objective, to maintain the total of the six capitals added together? If the latter, is it possible to 'add them together' in any meaningful way? This seems perhaps to lead to the need for a six-dimensional optimisation model, in which there are major difficulties (to put it mildly) of measurable comparability across the dimensions. Money, a humanly created and focussed social construct, is certainly not an adequate ‘common’ measurement concept across the six dimensions, but this is not to imply that a better alternative is conveniently available. We also suggest, although this is partly an empirical matter, that there seem likely to be major difficulties of distinguishing operationally between the six capitals.

3. Tools and methods

The IIRC Framework para 3-3 states: ‘An integrated report should provide insight into the organisation's strategy, and how that relates to its ability to create value in the short, medium and long term and to its use of and effects on the capitals’ (emphasis added). The implications are clear, and lead directly to a 12-box matrix checklist/template.

We use a case study approach. The issues are complex, and our work is exploratory. We expect difficulties and uncertainties in our analysis, mirroring expected difficulties and uncertainties in the preparation of disclosures by the entities themselves. A relatively small number of detailed case studies, explored in depth, and analysed against the matrix framework outlined above, are expected to give insight into what enterprises are doing. They can also be expected to give insight into what entities are NOT doing...

For this paper we have chosen from the IIRC database 4 companies that are given as examples of using the integrating reporting framework. All the four companies we analyse were selected from the consumer services sector. Two of them are state owned companies, therefore, a hybrid between the two sectors, and the other two are entirely private companies. One state owned company (Munich Airport) and one private company (Go-Ahead) are offering public transport services and are both European companies. The other state owned company (New Zealand Post) is offering post services and is from the Australasian region, and the other private company (Kingfisher) is a retail company, also from Europe. We have analysed their latest published reports.

The selection of these companies can be argued by the fact that we have tried to find an element of comparison. This is why we choose the same sector. The reason of selecting state owned companies is sustainable from our point of view in getting an insight on how the framework could be extrapolated to the public sector institutions. However, we are aware that these state owned companies are using the IFRS rules.

On the IIRC website, in their database there is the possibility to filter the companies after sector, year of the report, IR Guiding principles, Fundamental Concepts and Content Elements. By choosing the consumer service sector and from the tab “Fundamental Concepts”, “capitals” , the selection will show us the two state owned companies that we have analysed in our study.

In filling the disclosure matrix for each company, we have considered a binary encoding system, as follows: 1, if in the analysed report we could find the relation between the strategy of the company and the capitals, and 0 if there is no relationship.

4. The case studies

Data

The first company that we have analysed is the *Flughafen München GmbH* (FMG), which is the parent company of Munich Airport group and the operator of Munich's commercial airport. This company was founded in 1949 and operates the Munich airport and its other 14 subsidiaries offering full services across all sectors of airport management (FMG annual report, 2013). The shareholders of FMG are state institutions: the Free State of Bavaria (51%), the Federal Republic of Germany (26 %) and the City of Munich (23 %).

FMG has published its report for 2013, being part of the pilot companies that participated in the establishment of the IIRC framework. In the site of the Munich airport we could also find the same report called "Sustainability and Annual report 2013". From our understanding this is their first integrated report and is 224 pages long, being structured as follows:

1. Company profile and strategy
2. Service portfolio
3. Dialogue and social responsibility
4. Workforce and work environment
5. Environmental and climate protection
6. Financial review
7. Sustainable development.

At the end of their report we could find an IIRC index where the company summarizes in a table how they applied the Guiding Principles and Content Elements of the IIRC framework. Taking the first guiding principle "Strategic focus and future orientation", in the description is defined exactly the paragraph which stays at our basis of the analysis: 'An integrated report should provide insight into the organisation's strategy, and how that relates to its ability to create value in the short, medium and long term and to its use of and effects on the capitals'. The company say that they comply with this principle because in their report they present: "In the chapter 'Company profile and strategy' FMG describes the strategic alignment of the business model that is presented in detail in the chapter 'Service portfolio'. The strategic positioning in respect of the topics HR, corporate development and environmental protection are presented in the respective chapters. The management report gives a strategic view and the sustainability program summarizes short-, medium- and long-term planning in the sense of sustainable development."

The second case study we present is *Go-Ahead Group plc*, a private company, a leading bus and train operator in Great Britain. The company was first created in 1987, during the privatisation of the National Bus Company, as a small company. The shareholders of the company are institutional investors, 20.49% and other individuals (other than directors), 79.39%.We have chosen the company, as we already mentioned, from the database on the IIRC site. Its first integrated report was for the year ended 30 June 2012, called the 'Annual Report and Account'. On the company's website we have found their second integrated report for the year ended 28 June 2014, 'Annual Report and Accounts': 'Sustainability and corporate responsibility are integral to our strategy and the way we operate at every level of the business. This is our second integrated annual report which aims to present a comprehensive view of the Group.' Therefore, we draw the conclusion that for the year 2013 they haven't published an integrated report.

The report which we decided to analyze is the latest one, and is 162 pages long being structured in four big parts: Strategic report, Governance, Financial Statements and Shareholder information. As we will see in our further analysis the central pillar of their integrated report, as they argue, is the sustainability. Their business model is very important for the future of their business.

The third enterprise for which we conduct a case study is *New Zealand Post*, a state-owned provider of postal services from New Zealand. Historically, New Zealand Post has a rich history stretching back 170 years.

According to the official website, the New Zealand Post Group consists of a range of businesses providing communication and business solutions. The enterprise has several subsidiaries, such as: Kiwibank (the fifth largest bank in New Zealand, Express Couriers Limited (the Group's primary domestic parcels and logistics business), Converga (the Group's primary domestic parcels and logistics business), Reachmedia (a 50% joint venture which is one of New Zealand's largest distributors of unaddressed mail, including catalogues and flyers), CouriersPlease (a courier business that operates in Australia).

The analysed integrated report from 2012/2013 covers all of the New Zealand Post Group's operations. It has 44 pages and it is the first integrated report produced by New Zealand Post. The report is structured in 5 main sections which present: general information about integrated reporting, information about the six capitals, the outcomes from 2012/2013, information about the governance and information about the executive team. According to the IIRC Database, New Zealand Post considers 'the capitals' as a fundamental concept for the integrated report.

The fourth enterprise for which we conduct a case study is Kingfisher plc, a British multinational retailing company headquartered in London.

According to the official website, Kingfisher plc is Europe's largest home improvement retail group and the third largest in the world, with over 1,170 stores in eleven countries in Europe and Asia. Its main retail brands are: B&Q, Castorama, Brico Dépôt and Screwfix. Kingfisher also has a 50% joint venture business in Turkey with Koç Group. In addition, Kingfisher plc is included in two of the main socially responsible investment indexes – the FTSE4Good and Dow Jones Sustainability indexes.

Kingfisher has exposure to fast-growing, developing economies in Europe and Asia, including Poland, Russia and China, as well as having well-established businesses in developed markets like the UK and France. In total, the home improvement markets in which Kingfisher operates are worth over £100 billion.

From the ownership perspective, Kingfisher is a publicly-listed company on the London Stock Exchange (symbol: KGF) and, at December 31st, 2014, was a part of the FTSE100 index. The major shareholders are mainly private investment funds and most of the shares are owned by private investors who are able to trade them on the LSE. The company is also a part of the European Retail Round Table, an organization which represents companies from the European retail sector.

The analysed integrated report from 2012/2013 covers the entire Kingfisher Group's operations. The 120 pages report is 'Annual Report and Accounts 2012/13' and is structured into 3 main sections: a business review (with management statements, the emphasis on the strategy, aspects regarding sustainability, a financial review and an exposition of the risks), a governance presentation and the consolidated accounts. According to the IIRC Database, the main principles on which the Kingfisher integrated report is based are: strategic focus and future orientation, connectivity of information and conciseness.

Results

The case of FMG

In the case of FMG, a state owned company whose interest is to develop the area in which it conducts its activity, the results of our analysis are showing that there is a strong relation between the strategy of the company and the capitals. The report is clearly showing how the company is creating value inside and outside the business.

Taking the capitals one by one, we emphasize how the company is disclosing in their integrated report the use of the capitals in their strategy and the effects of the strategy on the capitals. The long, medium and short term strategy of FMG is oriented towards the extension of the business. Their plan for 2025, as defined in chapter 1, 'Company profile and strategy' but also all along the report, follows five directions: the development of the air traffic, the development of the landside access and land traffic inside the Munich airport, the expansion of the non-aviation business and the development of the consultancy services.

In the financial review, part of the report, there is disclosed the fact that 'Sufficient funds were available from the net cash flow from operating activities in 2013 to ensure the liquidity of the Group at all times. In addition, all investments could be covered and loans repaid from cash flows.' From a total of € 425,000,000 budgeted for investments during 2013, a big part were spent for the group's general expansion plan and this includes: '€ 189,000,000 was earmarked for the first construction phase of the Terminal 2 satellite. Roughly € 32,000,000 was set aside for extending the baggage transport system and € 17,000,000 for the acquisition of land relating to the consolidation of the project area to extend the runway systems.' Therefore, the financial capital of FMG is generated from the operating activities and loans. Hence, there is disclosed how the financial capital of the group is obtained and how is used. The discussion about disclosing the effect of the strategy on the financial capital is more complex than one might expect. What do the regulators mean by 'effects on'? From our point of view this 'effects on' can sometimes be similar to the 'use of'. The way in which the financial capital is provided or generated for funding the investments needed in order to achieve the strategical objectives could be considered as part of the effect of the strategy on the financial capital. The loans that are ways of procuring financial capital are higher given the fact that the company aims to build a new runway and has started to build a terminal satellite in 2013. The risk provisions are also higher. FMG is also disclosing the fact that for building their third runway, the company is contributing an important amount of money to the development of the infrastructure in the region. The output results of this consumption of financial capital will be seen in the long term, and this can be a positive one, or a negative one.

The strategy of FMG includes the manufactured capital as an important element. With the aim of growing the business, in 2013 the company started the construction of a satellite building extending Terminal 2, which accordingly to them is ‘a key milestone’ for their strategic expansion plans. A new runway will be built and they will also extend the luggage system. The company discloses the fact that the third runway they intend to construct is a strategic opportunity for the entire area of Bavaria and Germany for creating an attractive location for businesses.

In the notes of the financial part, there is specifying the ‘internally generated intangible assets’ such as special software for airport operation. This represents part of the intellectual capital of the company. This intangible asset is generated in order to achieve performance in the operations of the group, this is why we consider it directly related to the strategy. The company uses protocols and procedures, specific to its area of services, and these are also included in the so called intellectual capital of the group. We consider as being part of the intellectual capital also the brand of the company, by creating added value to the image of FMG. But this will be broadly discussed in the social and relationship part.

The company discloses the fact that they had increased the retention rate of their employees and that FMG is considered one of the best places to work in Germany accordingly to the surveys. FMG offers training programs and facilities for its employees and argues that a big part of the success of the business is a result of the job performance and competences of the employees. The human capital at FMG is one of the capitals on which their business model is developing and is supporting its strategy.

The social and relationship capital is disclosed in the report in the part ‘Dialog and social responsibility’. The company is involved in different consortiums of the industry it represents. Also, there is a strong collaboration with the political and legal institutions, and a permanent dialogue with the representatives of the area in which the FMG is developing its activities. They disclose the fact that all their suppliers are chosen from the area in order to help its development. Only a small part of their business partners are out of Germany and Europe. Their strategy is clearly affecting the area in which the company is acting in a positive and a negative way; this is why the dialogue with their neighbors is very important.

A key element of their social and relationship capital is the re-branding their business ‘Living ideas – connecting lives’, and the new logo suggestive of this slogan. In the message of the company they say: ‘Our brand is an investment in the future and indispensable for the economic growth in our strategic fields of action.’

From an economical point of view the strategy of FMG as it is now will bring wealth into the area, and will create new work places, but the company needs to be attentive to the environment. Here there is interference between the natural capital about which the company is disclosing in the part with the ‘Environmental and climate protection’. The strategy of FMG has effects on the natural capital; they introduced systems for reducing the noise in the area and the CO_2 emissions. Their new satellite building is a ‘green building’ which has all sorts of environmentally friendly solutions. FMG has a climate protection strategy with the help of which it is protecting the environment and is creating its natural capital.

Therefore, we can construct the matrix for FMG regarding the capitals' use and effects on their integrated report (as we can see within *Table 1*):

Table 1. Flughafen München GmbH – matrix regarding the capitals

Capitals	*Disclosures regarding use of:*	*Disclosures regarding effects on:*
1 – Financial	1	1
2 – Manufactured	1	1
3 – Intellectual	1	1
4 – Human	1	1
5 – Social/Relationship	1	1
6 – Natural	1	1

*Note: Within the matrix, 1=yes, 0=no

In our opinion, FMG can be an example of using the IR framework based on the capitals. For our analysis, the structure of the report was not so evident to identify all the six capitals. Some of them, like the intellectual one, were brought up between the lines.

The case of Go-Ahead Group plc.

In the first pages of the Go-Ahead Group plc. report, after the words of the Chairman of the Board of Directors, there is a small border having the title 'Driving integrated reporting'. From this note we acknowledge what the company understands by <IR>: 'Sustainability and corporate responsibility are integral to our strategy and the way we operate at every level of the business…. While our approach to our strategic priorities and sustainability has always been aligned, we have taken steps to improve the reporting of this.' Therefore, the company sees that better disclosure of the sustainability of their business model involves better <IR> disclosure. Also from this little note we find out that their strategic priorities are: 'Society, Customers, Our people and Finance.' We can suppose from this that we have here three of the six capitals: Social and relationship capital, Human capital and Financial capital.

The company presents its business model, from which we could extract which are the capitals that are the base of their sustainability: 'Our business model supports our strategy of providing high quality, locally focused passenger transport services as a leading employer in the transport sector, running our companies in a responsible manner, with strong financial discipline.' Going further with the analysis there are presented some key relationships and key inputs, therefore, allowing us to see how the capitals are used and affected by the strategy of the company.

For us, it is clear that the company uses some of the capitals. Thus, for the financial capital disclosures in the sustainability part, but also in the financial part of the report, the fact is that the majority of the finance is coming from the shareholders, but there are also bank credits and other debts. The use of this capital is for operating the business, the company mentioning that the higher expenses are with the employees. As their strategy is based on the people, we can observe from the report that this affects the capital…so the disclosed effect is the investment in people.

Taking into account the manufactured capital, we could extract from the report the fact that this is composed of the buses that the group owns. All the trains and the bus fleet are leased, but in the regulated bus business half of the buses are leased and half are owned. There is no disclosure of the effects of their strategy on this type of capital. We could not find any relation of the strategy with the intellectual capital of the business; moreover we could not extract any information regarding this type of capital.

The human capital is disclosed in the report and the relation with the strategy is very strong and well emphasized. The 'our people' is included in the business model in the relationship keys but also in the input keys. Thus, having well prepared people is creating value for the enterprise and at the same time there is a high retention of the employees and job satisfaction.

The business model of the group is based on the key relations. Therefore, one of the main uses of the capitals is the social and relationship capital. All the relationships with the strategic partners and suppliers, with the customers, the customers' satisfaction, the government, the community and the employees are factors of the success of this business, because it derives one from another: 'Professional relationships with core suppliers help to ensure and support efficient delivery of our passenger transport services.' 'Feedback from our shareholders forms part of our strategic discussions in the Boardroom.'

Regarding the natural capital the company mentions the fact that their vehicles use a combination of power between gas, electricity and diesel. In their first report from 2012, they were mentioning that they want to reduce their emission of CO_2 by 20% by 2015. In this report, they mention the fact that from 2008 they reduced the CO_2 by 12,2%. Like all the other businesses that want to remain in the market they need to make efforts to reduce the pollution.

Therefore, the matrix for the Go-Ahead group (table 2) looks different from the first diagram, mainly because we did not find all the capitals and the relations with the strategy.

Table 2. Go-Ahead Group plc – matrix regarding the capitals

Capitals	***Disclosures regarding use of:***	***Disclosures regarding effects on:***
1 – Financial	1	1
2 – Manufactured	1	0
3 – Intellectual	0	0
4 – Human	1	1
5 – Social/Relationship	1	1
6 – Natural	1	0

*Note: Within the matrix, 1=yes, 0=no

Go-Ahead Group plc discloses some of the capitals, but the capitals are not as well emphasized as for the first analyzed company. Here, the main part is the description of the business model, from where the uses of and the effects on the capitals can be extracted.

The case of New Zealand Post

As we mentioned in the previous section, in the case of New Zealand Post, we bring into analysis the annual integrated report from the financial year 2012/2013. This is the first integrated report for this enterprise and, as they mention in the introductory part, the company views ‘the movement toward Integrated Reporting as an ongoing process’, committing to the Integrated reporting principles and acknowledging that ‘fully integrated reports’ will only be issued in the future (page 8 from the report).

Moreover, the framing from the IIRC database which attributed ‘the capitals’ as a fundamental concept for New Zealand Post is correct, as they have indeed emphasized each capital in particular, dedicating separate sub-sections. The company’s interpretation of the capitals is the following (page 8 from the report):

- the human capital (‘our people’) represents ‘the composition of [the company’s] people, their skills, engagement and how [the company is] developing them’;
- the natural capital (‘our environment’) represents ‘how [has the company] used natural resources to carry out our business’;
- the social & relationship capital (‘our relationships’) represents ‘the relationships [the company has], and how [the company has] added value to those stakeholders’;
- the manufactured capital (‘our networks’) represents ‘the physical assets [the company holds] that combine to create [its] nationwide network’;
- the financial capital (‘our finances’) represents ‘the pool of funds available to [the company], and where it comes from’;
- the intellectual capital (‘our expertise’) represents ‘[the] knowledge, skills and special abilities, and how [the company has] developed these’.

Another interesting fact is the company’s mention of materiality, which says that the report ‘focuses on the issues that are most material to [the company’s] business, and those issues that are affected most by the execution of [the company’s] strategy’ (page 9 from the report). This particular phrasing is interesting due to the fact that it leads to the impression that the information presented in the report is selective and, at this point of the analysis, it is unclear whether ‘the whole picture’ is in place (note the use of the word ‘most’ in the actual phrasing).

Afterwards, the company starts to present its core strategies for the reporting period. The key fact is that for each strategy, in the header of the section, there are graphic representations of the used capitals, meaning that the company has clearly identified which capitals are linked.

There are six main strategies in total in the case of New Zealand Post (disclosed in pages 10 to 15 from the report). The first strategy, ‘Building a sustainable physical network’, is linked to the use of five of the six capitals, as follows: the human capital (by implementing an already tested co-operative system in which the same person could ‘deliver both postal and courier items’), the financial capital (the reduction of mail processing centres from six to three ‘will significantly improve efficiency and reduce overheads’), the manufactured capital (the relocation of 50 satellite sites and the premises’ sharing between courier and postal teams), the natural capital (the reduction of environmental impact due to the implementation of the 'Sequence Sorting process') and the social & relationship capital (the acknowledgement of the postal network as 'a vital component of the New Zealand economy and community', as well as the cases for Sequence Sorting advantages and Rural Delivery).

The second strategy, 'Delivering good customer experiences', is supposed to be connected with two of the capitals, respectively: the human capital (with the emphasis on customer services, staff specialization and the need for 'a remit to deliver a fundamentally new people model, a radically simplified product and service approach, and a totally new design ethos that removed physical barriers between [the] staff and [the] customers') and the social and relationship capital (mentioning Kiwibank's Innovative Online Relationship Managers – personalized service and the need for improvement in the case of business customers, including bulk senders).

The third strategy, 'Developing and growing Kiwibank', is linked with the use of two specific capitals: the financial capital (mentioning figures and information regarding the provisioning for bad debts, the increase in the net interest income and the fact that 'customer deposits accounted for 67 percent of all bank funding') and the manufactured capital (the increase in customer base, the improvements brought to the store networks in order to improve customer service and information regarding Kiwibank's credit rating – which affects the banking products).

The fourth strategy 'Ensuring our internal structure is efficient' follows the links with two capitals: the financial capital ('the proceeds of [three subsidiaries' shares] sales were primarily used to reduce debt and help pay for strategic investments in other parts of the business'; the financial impact for investments to operation centres is disclosed) and the manufactured capital (the restructuring of certain business units as a result of disestablishing 100 administrative positions and the forming of 'Digital Platforms').

The fifth strategy, 'Ensuring our people have the right skills', is impacted and has effects on two capitals: the human capital (the inclusion of 'more staff roles with banking skills – as well as enabling all staff to get out from behind counters and interact with customers' and the creation of 'a more flexible working environment for posties'; also, the report disclosed the three leadership skill development pathway programmes – Activate! – Motivate! – Navigate!), and the manufactured capital (mentions to their stores, with subsequent activities and 'customer outcomes'; e.g. 'customer experience in the stores is measured through monthly visits to every store by a mystery shopper').

The sixth and last strategy, 'Creating a range of digital services', is linked with three of the capitals, respectively: the social and relationship capital (the use of three digital services that improve customer service: 'RealMe, a Government-backed service that removes the need to show up in person each time to prove your identity'), the manufactured capital (the information regarding the launch and the function of these and their role for current and prospective products and customer services) and the intellectual capital, as they understand it ('recognition of the potential to use the Group's core competencies, including large-scale logistics and data management expertise').

Apart from the connections with the core strategies, there is a special section in the report where each one of the six capitals is carefully analysed and there is an extensive level of disclosure provided.

In the human capital subsection (pages 17-19), there is a presentation of the company's culture, the way people that are part of the organization are influenced by this culture and the pillar on which the strategy is based (high-performance organisation; leadership and talent management; capability; optimisation of the resource model; diversity; health and safety). Also, there is a breakdown of the workforce in figures (following different criteria, such as: location, status, age, gender and ethnicity) and some highlights from the 2012/2013 year (with emphasis on the level of engagement and safety and wellbeing in the workplace). The level of disclosure and awareness is fascinating as the report emphasizes the hazards posties continue to be exposed to, such as: 'dog bites, people backing out of driveways, uneven footpaths and surfaces, and collisions with vehicles'.

The social and relationship subsection (pages 20 and 21) brings specific disclosure regarding the connection with business partners and customers, the interaction with communities, the investments conducted by the company in the community ('as a socially responsible corporate member') and the activity of ActivePost ('the national sponsor of Small Sticks hockey, Waka Ama and the <Get Set Go> programme, which teaches fundamental movement skills to school children'). Also, there is information in this subsection regarding the sponsoring of the country's premier literary awards and The Community Post programme (which 'assisted nearly 2,800 community organisations in the past year – gifting them 1.5 million postage-included envelopes and $100,000 worth of marketing and development services').

Within the natural capital subsection (pages 22 and 23), the company discloses information regarding: its products (as an input, with emphasis on their recyclability), fuel use (as an input, with disclosure of the evolution of fuel use and a strategy for improving fuel efficiency, from one year to the next), its energy use (including a presentation of energy consumption reduction strategy), its waste (as a negative output, with an extensive plan of a reduction strategy and recycling).

The manufactured capital subsection (pages 24 and 25) makes note of: the proprieties that are in the company's ownership, postal and courier networks, the activity of Reachmedia (unaddressed circular and mailer delivery network), PostShop Kiwibank Outlets (with services of cashing bill payments), as well as information regarding Postal Network Access.

Within the financial capital subsection (pages 26 and 27) the company summarizes some important financial information regarding: shareholders' equity, retained earnings and reserves, funding, financial services, investments, the profit retention strategy, non-essential asset sales and, also, prospective financial information (for the coming year).

Last but not least, the intellectual capital subsection (pages 28 and 29) brings up information regarding the company's 'robust and comprehensive store and delivery networks – and the demonstrated excellence in complex large-scale logistics that enables those networks to thrive'. Also, the 'contract with the Reserve Bank of New Zealand to produce legal tender commemorative coins' is disclosed, alongside the business expertise (developing a depth of knowledge in how to effectively communicate to audiences, consolidating brands, as well as enabling government functions).

Therefore, we can construct the matrix for New Zealand Post regarding the capitals' use and effects on their integrated report (Table 3).

Table 3. New Zealand Post – matrix regarding the capitals

Capitals	*Disclosures regarding use of:*	*Disclosures regarding effects on:*
1 – Financial	1	1
2 – Manufactured	1	1
3 – Intellectual	1	1
4 – Human	1	1
5 – Social/Relationship	1	1
6 – Natural	1	1

*Note: Within the matrix, 1=yes, 0=no

We acknowledge the fact that New Zealand Post is a good example of an integrated report that has 'the capitals' as a fundamental concept. It is an appropriate model for constructing such a report through linking all the content elements (subsequently enforcing the 'connectivity of information principle'). Also we can state that the impacts are bidirectional in connection to the strategy as the company discloses both the use and the effects on each capital. This provides a proper understanding on how each resource used within the operational activity contributes to the achievement of the outcomes.

The case of Kingfisher

For Kingfisher plc, we have brought into our analysis the 2012/13 integrated report. From the beginning, we make note of the fact that in its actual draft, the report is not called integrated, but it is called 'Annual Report and Accounts 2012/13'. Nevertheless, it has been included by the IIRC in their database as a 'good example' of integrated reporting.

The 120-pages document is structured in the form of an extensive business report, with three parts: a business review, a governance section and the consolidated accounts. As far as the integrated reporting content elements are to be found, we realized that these can be found in the first section. Hence, this form of the report is not a conventional one for integrated reporting (like others we are accustomed to), nor does it mention the fact that integrated reporting is to be implemented in this company (it is only assumed that the report is assimilated to integrated reporting). However, there are elements which we have identified as being part of the content elements of integrated reporting (with specific emphasis on the capitals).

First of all, there is a brief presentation of the company's strategy, 'Creating the Leader' (which is a continuation of the former business strategy, 'Delivering Value'). Therefore, we find initial key concepts in their strategy that point out the orientation towards integrated reporting. This strategy has eight steps (in pairs) that the company must follow in order to achieve its goal. For each pair of steps, there are milestones, emphasizing progress during 2012/13 and targets during 2013/2014.

The first two steps (presented on page 9 from the report) suggest that the company should 'make it easier for customers to improve their home' and, also, it 'should give customers more ways to shop'. Information is provided here regarding social and relationship capital (by disclosing the networks which can be used by customers to reach the company's products, such as: online platforms, YouTube channel, mobile offer, etc.). Within the coming year, the company is expected to launch several marketing campaigns and extend and upgrade its websites (in order to have a closer connection with the public).

Steps number three and four (presented on page 11 from the report) suggest that the company is expected to 'build innovative common brands' and 'drive efficiency and effectiveness everywhere'. In this section, we have recognised the use of four different capitals, respectively: the financial capital (as the company discloses sourcing of sales and driven Group-wide cost efficiencies through 'goods not for resale'), manufactured capital (expected new office and distribution centres openings, as well as the development of new products), human capital (expected 'staff bonus programmes to Poland, linked to individual store sales & profit growth') and intellectual capital ('a [new] stock forecasting & replenishment IT solution, successfully rolled out in B&Q UK & Ireland and Poland').

Steps number five and six (presented on page 13 from the report) imply that '[the company] should grow its presence in existing markets' and, further, it should 'expand in new and developing markets'. This section has links solely to manufactured capital, as it presents information on new stores, revamped and extended stores, as well as expected new openings in the coming year.

Steps number seven and eight (presented at page 15 from the report) take account of the need for 'developing leaders and connecting people' and 'Sustainability: becoming net positive'. In this section, four types of capital are addressed: the human capital (the broadening of the Group's Executive Team), the social and relationship capital (the launch of the Kingfisher 'One Academy' – for top 250 managers, as well as the Community Sustainability area), intellectual capital (the Innovation Sustainability area) and the natural capital (the Timber and Energy Sustainability Areas). Additionally, each Sustainability area is separately disclosed and for each one there is a target for the company to achieve at some point (e.g. in the case of Timber, the company's aspiration is that by 2050 it will create more forest than it uses; in the case of Energy, the company's aspiration is that by 2050 every Kingfisher store and customer home is zero carbon or generates more energy than it consumes; and so on).

Note that until this point in the report, we have only encountered uses of the six capitals (deduced, not explicit). Hence, it is difficult to establish a direct relationship between the outcomes of the strategy and the effects on the capitals. We can only assume that the eight steps which can lead to the strategic goal will have a valid contribution (and, therefore, an actual effect on the strategy, but it is only unidirectional – from the capitals towards the strategy). The only capital which has a bidirectional disclosed effect is the financial capital, through the financial review (from page 17 to page 24) that follows the sustainability section. This validates the point of view which states that for private enterprises, the financial capital takes preference.

Also, there is a section in the business review which discloses potential risks regarding the strategic aims (or the 'steps', as we called them) and ways to mitigate the risks. However, the presentation is also distinctively for each step and makes no further connections.

In this respect, we can construct the matrix for Kingfisher plc regarding the capitals' use and effects on their integrated report (Table 4).

Table 4. Kingfisher plc – matrix regarding the capitals

Capitals	***Disclosures regarding use of:***	***Disclosures regarding effects on:***
1 – Financial	1	1
2 – Manufactured	1	0
3 – Intellectual	1	0
4 – Human	1	0
5 – Social/Relationship	1	0
6 – Natural	1	0

*Note: Within the matrix, 1=yes, 0=no

We acknowledge the fact that Kingfisher plc is not a conventional integrated report (in fact, we imply that it does not match with our understanding of an integrated report). However, if not explicitly, it puts the six capitals to use when it comes to drafting a strategy that will 'create value' (for whoever this value might be) and it distinctively points out each resource how it contributes to the company's success. On the other hand, these capitals are presented mostly in part, and the connectivity of information is not sufficient (as the IIRC database mentions that it is a core principle in the case of Kingfisher's 'integrated report').

4. Conclusions

Our preliminary findings from this research reveal some interesting facts. The first aspect of our discussion is the positioning of the six capitals within the integrated reporting process of the companies from the Pilot Programme. Thus, on the online platform from the IIRC we have encountered a filter called '<IR> Fundamental concepts', which has two subsequent options, respectively: 'Value creation' and 'The capitals'. From our case studies, two of the companies – New Zealand Post and Flughafen München GmbH – are listed as having 'the capitals' as a fundamental concept in their integrated reports. This is true and accurate because within these reports we can easily notice that the companies disclose a reasonable amount of information regarding the use and effect on the capitals (both separately, for each capital, and also interconnected). On the other hand, there are reports where the capitals' disclosure does occur, but is not explicit and presented separately (the reader of the report must identify them on his own, as it is the case of Kingfisher plc and Go-Ahead).

Another relevant discussion is regarding the understanding of each type of capital. The Integrated Reporting Framework has a clear delineation of what each capital represents and which resources are assimilated. However, we have noticed some inadvertences in linking the actual resources used by the companies and the standard definitions from the Framework. This is mainly because we acknowledged that the capitals tend to be company-specific and not identical stereotypes (for instance, in the case of New Zealand Post – a customer service company – service performance in the locations from its network is assimilated to the ‘end product’ and, ultimately, to the manufactured capital. Since the IIRC has accepted within its database these integrated reports as ‘examples of good reporting practice’, we assume that the definitions of the capitals are not restrictive and they just provide guidelines on identifying and delineating them within the reports.

Each company we have analysed in our research so far has its ‘integrated reporting style’. Therefore, there are no two reports alike, thus, the comparability between them is quite difficult to achieve. This is mainly because integrated reporting is a ‘principle based’ reporting system and the construct is flexible for each reporting entity. This particular aspect is also valid in the case of the six capitals as each company has its way of presenting them and of linking them to the strategy and the outcomes.

Although the sample so far is small (just four integrated reports), we have noticed the fact that the information presented in the reports (with specific focus on the capitals) is mainly positive, focusing more on the ‘things done right’ by the companies and less on the negative impact. This leads us to the subsequent questioning of the materiality of these reports (we have also pointed this out previously in this article, in the case of New Zealand Post). If only the positive effects from the use of capitals are disclosed, then the integrated reports might be biased and could be merely a form of ‘marketing through reporting’. This is merely a preliminary assumption and should be investigated through further research (including through analysing a bigger sample of integrated reports).

Also, the claim of using the principles of integrated reporting correctly is, to some extent, faulty in the case of some companies. For instance, in the case of Kingfisher plc, the IIRC website claims that ‘connectivity of information’ is a main principle. However, in the case of the six capitals, the implied inference takes account of each capital separately (mainly in reference to the use and less to the effect). This is not the case for New Zealand Post and Flughafen München. This raises a subsequent question whether the state-owned companies have a better level of disclosure for the capitals in comparison to privately owned companies (where the interests of financial capital providers are more significant), and this too should be further investigated.

Therefore, in connection to our research questions, we acknowledge the fact that the IIRC has accurate provisions when it comes to defining the capitals (and they give examples, as we can see in the actual phrasing from the Framework). Through these definitions, it is assumed that every reporting entity knows the basic information regarding what each capital should consist of. However, this is not a restrictive provision and there are specific interpretations for each separate case (as the capitals themselves are company specific).

The IIRC does intend the reporting entities to take these capital seriously. The main aspect which supports this assumption is the fact that on the online platform are presented – as ‘good examples’ – only the companies which have accurately respected the Framework guidelines. Therefore, the IIRC has carefully chosen its frontline of reporting entities in order to show others how information should be disclosed within an integrated report (and the level of disclosure – especially for the capitals – is high in the case of some companies, like New Zealand Post or Flughafen München).

If we discuss what the entities disclose for the capitals, we acknowledge that this is at least questionable. Although they do disclose a reasonable amount of information following the IIRC guidelines and they do take these capitals seriously (in order to get promoted as 'good reporting examples'), their interpretations and understanding of the concepts differ significantly from case to case. This infers the question whether the IIRC has been explicit enough when drafting the Framework (we consider that it does provide an adequate level of comprehension within the definition of capitals). Having said that, the comparability between reports from different entities remains low (mainly because integrated reporting is assimilated to narrative reporting). Also, there is an imbalance between capitals. They should be perceived in an equitable way, but some of the capitals – like financial and manufactured – prevail in disclosures (possibly because of their emphasis on financial reporting frameworks from other organizations and the different powers of stakeholders).

Ultimately, in the case of the differences that may emerge between the private and public sectors in the case of integrated reports, our preliminary findings are inconclusive as we do not have a relevant basis for comparison (mainly because the first integrated reports from the public sector are not yet published, the Pioneer Network still being in full development). We will continue to investigate this aspect in future research projects. There is more work to be done.

REFERENCES

Alexander, D. (2015). The unsustainability of Integrated Reporting. Working paper

Flower, J. (2015). The International Integrated Reporting Council: a Story of Failure *Critical Perspectives on Accounting* (in press).

IASB (2010). The Conceptual Framework for Financial Reporting; IASB; London

IIRC (2013). The International <IR> Framework (9 December 2013).

IPSASB (2014). The Conceptual Framework for General Purpose Financial Reporting by Public Sector Entities;

*** CIPFA (2014) http://www.cipfa.org/policy-and-guidance/integrated-reporting-public-sector-pioneer-network (accessed on: 15.01.2015).

*** CRUF Guiding Principles (2006) – online at: http://www.cruf.com/Guiding-Principles-Nov-2006.pdf (accessed on: 30.10.2014)

*** Go-Ahead Group plc. Annual Report (2014) – online at: http://www.go-ahead.com/~/media/Files/G/Go-Ahead/media/news/2014news/04-09-2014/annual-report-2014-v2.pdf (accessed on 18.01.2015)

*** http://www.go-ahead.com/aboutus/history-timeline.aspx (accessed on 18.01.2015)

*** IIRC – Integrated Reporting Database, online at: http://examples.theiirc.org/home (accessed on 05.01.2014).

*** Kingfisher plc – Company Overview, online at: http://www.kingfisher.com/index.asp?pageid=15 (accessed on: 15.01.2015).

*** Kingfisher plc – History, online at: http://www.kingfisher.com/index.asp?pageid=17 (accessed on: 15.01.2015).

*** Kingfisher plc – Markets, online at: http://www.kingfisher.com/index.asp?pageid=18 (accessed on: 15.01.2015).

***New Zealand Post (2013). Annual Review 2013, online at: https://www.nzpost.co.nz/sites/default/files/uploads/shared/annual%20reports/2013-annual-review.pdf (accessed on: 15.01.2015).
***https://www.nzpost.co.nz/about-us/who-we-are/new-zealand-post-group (accessed on: 15.01.2015).
***https://www.nzpost.co.nz/about-us/who-we-are/history-of-new-zealand-post (accessed on: 15.01.2015).

STUDIA UNIVERSITATIS BABEȘ-BOLYAI OECONOMICA, VOLUME 60, ISSUE 3, 2015

NAVIGATING THE INFLUENCE OF MARKETING ORIENTATION ON UNIVERSITY PERFORMANCE

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Abstract. This study is part of a broad stream of continuing research examining market orientation within higher education and its potential impact on university performance. The study examined the influence of marketing orientation on the performance of South African universities. The sample consisted of 507 academics who were conveniently selected from six universities of technology, located in various provinces of South Africa. Seven marketing orientation elements, namely, market intelligence generation, inter-functional coordination, customer orientation, market intelligence dissemination, intelligence response design, intelligence response implementation and interdepartmental dynamics that exert an impact on university performance were identified using the exploratory factor analysis technique. A Pearson Correlation analysis revealed positive and significant associations between all seven market orientation elements and university performance. Mean score ranking of the seven elements showed that intelligence response design was the most important market orientation element. Subsequent multiple regression analysis revealed that inter-functional coordination, customer orientation, market intelligence dissemination, and intelligence response design predicted university performance. Using the results of this study, marketing practitioners in universities may be able to address university performance challenges by applying a right mix of the seven marketing orientation dimensions examined in this study. The results of this study can be used to develop appropriate marketing strategies that are useful in the diagnosis and rectification of performance challenges in universities.

JEL classification: M31, I23

Keywords: Marketing orientation, university performance, higher education institution

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1. Introduction and Background

Higher education institutions are under growing pressure as they are exposed to various demands from different stakeholders. During the past decades, such institutions have been directing mounting attention to the understanding, adoption and implementation of market orientation (Notshulwana, 2011). In addition, there has been an increased emphasis on efficiency and effectiveness in the evaluation of outputs in higher education institutions, which places them on the spotlight with respect to their performance (Badat, 2015). Furthermore, expansion, diversification, increased competition and greater choice have been described in literature as the overarching forces that have driven educational institutions to embrace the marketing idea (Odhav, 2009). However, marketing in higher education has only recently begun to have an overt presence, at least in the developed world, after a protracted concealment under more traditional communications structures and functions (Hay and Monnapula-Mapesela, 2009). This has culminated in the enhancement of emphases placed on elements such as the public relations office, the external relations office, the international students' office, students' affairs department, publicity and publications office that have traditionally been claimed to be the bases for university marketing (Veldsman, 2014). This shows that marketing orientation has become central to the success of universities in their daily operations.

The purpose of this study was to examine the influence of market orientation on the performance of South African universities. According to Arnolds, Stofile and Lillah (2013), the marketing of higher education is still in its infancy in many parts of the world. Three reasons can be cited for this trajectory. The first is the formidable obstacle of internal resistance to marketisation in higher education. The second is the failure of higher education to identify itself with a specific product, and this is epitomised in the ongoing battles between competing positions on whether higher education should primarily be about research or teaching, and whether students are consumers or products. The third is the failure of higher education to domesticate the marketing idea and turn it into a home-grown philosophy by utilising marketing ideas based on borrowed wisdom from the business sector. Within a Southern African context, universities in the region are at different stages of marketisation and their levels of marketing sophistication and understanding, which closely resembles those in the business sector, vary from institution to institution (Hammond, Webster and Hammon, 2006). Research evidence also suggests that current higher education marketing lacks an appropriate contextualisation, is poorly organised and coordinated, largely responsive and not strategic and its application lacks formal operational guidelines (Mafini, 2014). Empirical research thus remains an important channel through which answers to these conundrums can be provided. This study is significant in that its results can be used in developing a suitable marketing orientation mix to solve performance related challenges in institutions of higher learning.

Within the South African higher education sector, no conspicuous marketing approaches seem to exist. Such apparent lack in market orientation may be due to the diversity in the vast higher education sector with previously historically black institutions limited in financial resources and generally inferior facilities compared to the prestigious historically white universities, which were better funded under the previous government dispensation (Samuel and Chipunza, 2013). Furthermore, as stated by some scholars (Sedgwick, 2004; Divala, 2014), it appears that higher education institutions in South Africa do not use common market orientation activities as exhibited through the decline in student numbers at some higher education institutions. Students in South Africa are now faced with a broader selection of higher education institutions all competing with one another, since new types of higher education institutions having been created, such as comprehensive universities and stand-alone universities of technology (Mbali, 2010). Universities in the country are therefore left with the modest option to embrace the marketing idea. In view of these developments, this study examined the influence of market orientation on the performance of South African higher education institutions. The study is significant in that its results may provide information that may be used by universities in the country to initiate approaches to enhancing their overall performance/s in the highly competitive higher education sector in the country.

2. Theoretical Background

Market orientation

Market orientation may be perceived as the organisation-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments and organisation-wide responsiveness to this intelligence (Kohli and Jaworski, 1990). It is a set of beliefs that puts customer's interest first, and raises the awareness of the need to obtain information about competitors in order to a gain competitive edge in the turbulent, competitive environment (Hemsley-Brown and Oplatka, 2010). Market oriented organisations typically have a good understanding of their competitors, both current and potential,l to serve the same markets (Kaynak and Kara, 2004). According to Perrault and McCarthy (2002), one of the major issues that has consensus amongst researchers is the lack of systematic efforts to develop valid measures of market orientation. However, this study integrated and operationalised the well-established models of Jaworski and Kohli(1993) behavioural model and the Narver and Slater (1990) cultural model in examining the extent to which universities in South Africa reflect these elements in their marketing strategies and the impact of these elements towards university performance.

In higher education, the starting point for a market-oriented university is a market intelligence philosophy that encompasses all the informal as well as formal means of generating market intelligence about students, competitors, industry and business needs and preferences (Penceliah, 2004). This includes monitoring current and prospective students, marketing activities implemented by other institutions, employing organisations and detecting fundamental shifts in higher education environments (Assad *et al.,* 2008). In addition, it is crucial for universities to have the forward looking and futuristic orientation of serving the target market, because this facilitates the satisfaction of the inherent social obligation to produce dynamic and competent graduates (Cabrera, Colbeck and Terenzeni, 2001). This adds credence to the assumption that market orientation is appropriate in higher education establishments.

The higher education environment in South Africa

In South Africa, a new public higher education landscape was established in South Africa after the emergence of democracy in 1994 (Gultig, 2000). By 2015, there were 26 higher education public institutions which are classified into 11 traditional universities, six universities of technologies, and nine comprehensive institutions (Hall, 2015). Amongst other things, the new landscape incorporates an institutional nomenclature, notably the terms universities of technology and comprehensive institutions, which are essentially career-focused. Similar to other countries, higher education institutions in South Africa are faced with challenges regarding significant enormity of the sector and the fierce competition for market share that characterises it (Dube and Ngulube, 2013). This is further exacerbated by the South African government's well-promulgated intention to increase the participation rate in higher education from 15 percent to 20 percent within twenty years (South African National Plan for Higher Education, 2001). The government has also linked enrolment statistics to funding and consequently increased competition for students among higher education institutions (Gillard, Saunders, Terblanche and Sukel, 2012). This compels South African higher education institutions to find innovative ways to increase their competitive advantage as the higher education sector undergoes these essential transformations (Akojee and McGrath, 2008).

University performance

This study acknowledges the complexities, controversies and the general lack of unanimity as regards the metrics that can be used to measure organisational performance the world over. However, for the purpose of this study, performance indicators that are prescribed through the South African National Plan for Higher Education (2001) were adopted as the parameters for defining and measuring university performance. As put forward by Van Staden (2010), these performance indicators entail that a well performing university has the following five characteristics;

- technology-based programmes with attributes such as technological competence and undergraduate career-oriented education,
- research and innovation through technology and technique in strategic areas,
- entrepreneurial and innovative ethos,
- national and international impact and recognition,
- sustainability in engagement and practice.

In addition to the above, it is also acknowledged that in South Africa, a performance oriented based higher education sector is critical in meeting national current and future development needs (Van Straaten-Theron and Dodd, 2011). To ensure that performance objectives are met, the performance of all higher education institutions in the country is monitored on annual basis by the Department of Higher Education and Training in accordance with the Minister's published input and output targets based on predetermined objectives (PricewaterhouseCoopers, 2014). This, to some extent, has ensured that universities are kept in check in terms of how their performance.

Market orientation and university performance

Market orientation is a basis for organisations to understand their market which ultimately leads to enhanced customer satisfaction (Day, 1994). Some studies (Slater and Narver, 1994; Kaynak and Kara, 2004) support the proposition that market-oriented organisations tend to outperform their competitors. Ellis' (2006) review of market orientation studies demonstrated a strong and persistent correlation between market orientation and organisational performance. Other studies (Rodriguez, Cana, Carrilat and Jaramillo, 2004; Sin, Tse, Yau,Chow and Lee, 2005) further advance that the relationship between market orientation and university performance is both a positive and dynamic one which is moderated by external as well internal environmental factors alike. It is logical then for this study to explore the role of market orientation in helping universities in South Africa to align their internal resources, which provides superior performance by becoming more relevant to their stakeholders. Thus, the following proposition is put forward:
Research Hypothesis: Market orientation exerts a positive influence on university performance in South Africa

3. Research Methodology

Research design

This study made use of a quantitative approach, because it is flexible and permits replication of the research procedure, thus enhancing the validity and reliability of the research results (Burns and Bush, 2010). The cross-sectional survey design was adopted, which measures units from a sample of the population at one point in time and is applicable to both small and large samples (Kumar, 2014).

Sampling design

The population for this study was composed of all academics in six universities of technology in South Africa. The target population consisted of academics in the five universities of technology that consented to participate in this study. The sample frame was drawn from a listing of higher education institutions that is available on the South African Council of Higher Education website, which provided links to each of the listed higher education institutions from which relevant information was obtained.

Respondents were recruited using the non-probability convenience sampling technique. This method was necessitated by the busy schedules of most academics, which made it difficult to access them at the same place and time. The convenience approach made it easier to contact only those that were accessible at the time of research. The sample size was initially pegged at N =650, which is consistent with a number of previous market orientation research (Bakewell and Gibson-Sweet, 1998; Mazzarol, 1998; Ivy, 2001; Rindfleish, 2003). However, after distribution of the questionnaire, the final sample consisted of a total of 507 academics, giving a response rate of 78%. The profile of these respondents is reported in Table 1.

Table 1. Demographic profile of respondents

Demographic factor	Categories	n	%
Gender	Males Females	289 218	57 43
Age group	<30 years 30-39 years 40-49 years 50-59 years ≥60 years	66 172 160 29 28	13 34 32 16 5
Number of years employed	<3 years 3-6 years 7-10 years ≥10 years	71 239 126 71	14 47 25 14
Highest academic qualification	Diploma/degree B. Tech/Honours degree Masters Doctorate	44 197 193 71	9 39 38 14
Current position	Junior lecturer/lecturer Senior lecturer/ associate professor HOD/dean/professor	246 209 52	49 41 10
Faculties of respondents	Management Sciences Engineering Humanities Applied Sciences Other	188 112 101 71 35	37 22 20 14 7

Instrumentation and data collection procedures

The survey questionnaire used in this study was partitioned into three sections. Section A elicited respondents' demographic information. Section B consisted of questions eliciting information concerning market orientation. These questions were adapted from a study conducted by Zebal (2003). Section C of the questionnaire elicited information on university performance using questions adapted from Ma and Todorovic (2011). Questions in sections B and C were presented in a Likert Scale configuration in which 1 represented strongly disagree and 5 represented strongly agree.

In order to improve the quality of the measurement instrument, the questionnaire was first reviewed by a panel of experts consisting of three academics in the marketing department at a university of technology based in Gauteng Province. Thereafter, the questionnaire was pretested with a conveniently selected sample of 10 academics who work in the marketing departments of three participating universities of technology. The feedback provided by the panel of experts and the pre-test facilitated some minor changes to the length, wording and appearance of the questionnaire, which refined its overall quality. The actual data collection was conducted in August 2013 after permission had been obtained from the research directorates of each participating institution. Questionnaires were couriered to a contact lead person at each university of technology, who then assisted with their distribution and collection. A cover letter was attached to the questionnaire to highlight the purpose of the study as well as associated ethical issues.

Statistical analysis procedures

For the purposes of this study, data were analysed with the aid of the Statistical Packages for the Social Sciences (SPSS version 22.0). Descriptive statistics were used to analyse the demographic profile of respondents. Correlations between constructs were tested using Pearson's correlation coefficient. Predictions between dependant and independent constructs were tested using regression analysis.

4. Research Results

The results section is divided into six sub-sections: namely, reliability and validity, correlation analysis, regression analysis, discussion, limitations and suggestions for further research, conclusions and managerial implications.

Reliability and Validity

Reliability may be perceived as the extent to which a measurement yields consistent results when the construct being measured has not changed (Leedy and Ormrod, 2014). In the current study, reliability was measured using the Cronbach alpha coefficient. The reliabilities of the constructs used in this study as shown in Table 2 ranged from 0.803 and 0.926. Since these values are well beyond the 0.7 minimum threshold recommended by Malhotra (2010) it can be stated that the measurement scales used in this study were internally consistent or reliable.

In this study, validity was defined as the extent to which differences in the observed scale scores reflect true differences between objects on the characteristics being measured (McDaniel and Gates, 2010). Measurement scales were tested for content, convergent, predictive validity. Content validity was ascertained by ensuring that the pre-test was followed by the pilot testing of the survey instrument. The questionnaire was pilot tested with a convenient sample of 41 respondents who were selected from the population from which the sample was drawn. The pilot study facilitated further modification of the questionnaire to ensure that all questions were clear and accurately captured the required information. Convergent validity was ascertained through the computation of Pearson's correlations. The positive correlations existing between the dependant and independent constructs (refer to Table 3) denote the existence of acceptable convergent validity between in the study. Predictive validity was ascertained through regression analysis. The results of the study show that four of the seven independent constructs were statistically significant, thereby depicting the presence of satisfactory predictive validity in the study.

Exploratory factor analysis

The aim of this study was to determine the influence of market orientation on university performance, using evidence obtained from a sample of South African academics. The market orientation factors identified in the study consisted of seven dimensions that were extracted through the exploratory factor analysis procedure. As prescribed by Bradley (2010), the Bartlett's test of Sphericity and the Keiser-Meyer-Olkin (KMO) measure of sampling adequacy were conducted first to determine the suitability of the data for a factor analysis. The results of the two tests were acceptable at $p=0.000;<0.05$ for the Bartlet's test and 0.955 for the KMO, thereby giving an indication that exploratory factor analysis could be satisfactorily conducted on the data (Malhotra, 2010). In the extraction of the factors, consistent reference to the percentage of variance explained, the scree plot and eigen values of the items in the scale was made. This protocol culminated in the extraction of seven market orientation factors, namely market intelligence generation, inter-functional coordination, customer orientation, market intelligence dissemination, intelligence response design, intelligence response implementation and interdepartmental dynamics. An overview of the factors, their respective operational definitions and the cumulative percentage of variance is reported in Table 2.

Table 2. Market orientation dimensions and description of dimensions

Factor	Label	Percentage of Variance Explained	Cronbach Alpha	Description
MO1	Market intelligence generation	44.053	0.926	This pertains to a set of beliefs that puts customer's interest first and raises the awareness of the need to obtain information about competitors
MO2	Inter-functional coordination	6.683	0.904	This relates to the capability of an organisation to achieve cooperation of the different units in market intelligence generation
MO3	Customer orientation	4.235	0.840	This refers to a group of initiatives implemented to support sales and service staff in considering customer needs and satisfaction of their major priorities
MO4	Market intelligence dissemination	3.645	0.803	This pertains to the efforts made to communicate market intelligence information among the functional areas
MO5	Intelligence response design	3.319	0.859	This refers to how different departments respond to various market needs

Factor	Label	Percentage of Variance Explained	Cronbach Alpha	Description
MO6	Intelligence response implementa-tion	2.985	0.817	This involves the application of programmes geared towards the student or industry as a result of response design
MO7	Interdepart-mental dynamics	2.811	0.910	This refers to the nature of interactions between departments
	University performance	N/A	0.904	This refers to the outputs of the university in terms of teaching, research and community engagement

As shown in Table 2 the seven factors accounted for approximately 68% of the explained variance in market orientation. The value of explained variance was considered to be satisfactory since it surpasses the 60% minimum threshold recommended by Malhotra (2011). Among the seven factors, market intelligence generation made the highest contribution of approximately 44% of the variance explained in market orientation, while interdepartmental dynamics made the lowest contribution of approximately 2.8% to the total variance explained.

Correlation analysis: market orientation and university performance

The degree of association between the seven market orientation constructs and university performance was measured using Person's Correlation Coefficient. The results of the correlation analysis are reported in Table 3.

Table 3. Correlation analysis, means and mean-score ranking: market orientation and university performance

CONSTRUCT	MO1	MO2	MO3	MO4	M05	MO6	MO7	UP
UP	.528**	.550**	.577**	.450**	.423**	.593**	.459**	1.000
Mean	3.52	3.52	3.60	3.61	3.74	3.50	3.46	3.64
Mean Ranking	4	4	3	2	1	6	7	N/A
Note: ** Correlation is highly significant at the 0.01 level (2 tailed) * Correlation is significant at the 0.05 level (2 tailed). MO= Market Orientation: UP= University Performance								

An analysis of the correlation matrix (Table 3), indicates a significant positive relationship between university performance and market orientation factors ranging between r= 0.423 and r=0.577 (all with p-values <0.01). The fact that all seven factors of market orientation were either moderately or strongly correlated with university performance signifies that overall market orientation is significantly correlated to university performance. Thus, the research hypothesis is accepted, which means that the degree to which market orientation is operationalised influences university performance.

Mean scores computed for all constructs ranged between 3.46 and 3.74, which demonstrates an inclination towards the ‘Agree’ position on the Likert Scale. This result depicts that respondents generally concurred that all constructs were important. Among the seven market orientation factors, intelligence response design (mean = 3.74) emerged as the most important factor while interdepartmental dynamics (mean= 3.46) emerged as the least important factor.

Regression analysis

Since the relationship between market orientation and university performance showed positive correlations, regression analysis was conducted. The results are reported in Table 4.

Table 4. Regression analysis: market orientation and university performance

Independent variable: Market Orientation	**Dependent variable: University Performance**				
	Beta	T	Sig	Collinearity Statistics	
				Tolerance	VIF
M01	0.015	0.268	0.789	0.588	3.472
M02	0.244	5.973	0.000	0.547	1.829
M03	0.194	4.136	0.000	0.617	2.396
M04	0.017	0.411	0.681	0.554	1.804
M05	0.134	2.942	0.003	0.641	2.267
M06	0.225	5.110	0.000	0.770	2.128
M07	0.086	1.954	0.051	0.575	2.105
R= 0.738 Adjusted R^2 = 0.538 F=85.058					

The regression model reveals that the seven market orientation sub-scales (adjusted R^2 = 0.538) explained approximately 54% of the variance in university performance. This symbolises that the remaining 46% of the variance in university performance is explained by other extraneous factors not included in this study. With regards to the evaluation of the assumptions of multicollinearity, if the Variance Inflation Factor (VIF) is greater than 10 then collinearity is a cause for concern (Field, 2005). Multi-collinearity means that several of the independent variables are in one way or another highly correlated, which reduces the distribution and of the data and makes the results of the regression analysis unreliable (Kock and Lynn, 2012). The VIF for the five subscales were acceptable since they ranged between 1.804 and 3.472. Tolerance values ranged between 0.547 and 0.770, which is beyond the 0.5 minimum threshold recommended by Denis (2011). Therefore, collinearity statistics did not give an indication of a severe threat in this study.

5. Discussion

The Pearson correlation analysis (refer to Table 3) reveals that although there was a significant and strong positive correlation between market intelligence generation and university performance (r = 0.528; p < 0.01), the market intelligence factor was statistically insignificant (β = 0.015; t=0.268; p=0.789) in the regression analysis. This result depicts that while higher marketing intelligence generation results in greater university performance, there appears to be no predictive relationship between the two constructs. Market intelligence generation involves obtaining market information from customers about their needs (O' Connell, 2001). According to Zebal (2003), components of market intelligence generation that lead to an increase in organisational performance include the systematic methods of organising and retrieving current market information, intelligence networking to collect and share information with everyone within the institution, systematic research approach to gather new market information, and the process of analysing information for decision-making purposes. Market intelligence generation has also been reported as a focal point which has the propensity to generate market information which becomes a source of competitor orientation and customer orientation (Carr and Lopez, 2007). Consequently, market intelligence generation becomes the source of ideas in implementation of the marketing concept, which is renowned for enhancing the performance of organisations (Drysdale, 1999).

The correlation analysis further revealed a strong positive and significant association ($r = 0.550; p < 0.01$) between inter-functional coordination and university performance. In the regression analysis, inter-functional coordination was statistically significant ($\beta = 0.244$; t=5.973; p=0.000) in predicting university performance. This result demonstrates that inter-functional coordination exerts a positive influence on and predicts university performance. As mentioned before, inter-functional coordination is the capability of an organisation to achieve the cooperation of the different units in market intelligence generation and this can be achieved through integration and coordination of the higher education institution's resources (Rivero-Camino and Ayola, 2010; Hemsley-Brown and Oplatka, 2010). This coordination implies a good communication between different departments with a view of developing a good working relationship and coherence among various departments (Alhakimi and Baharun, 2010). It also encourages the existence of a good inter-personal atmosphere, where resources are shared (Akonkwa, 2013). Through this approach, it would then be possible to be more innovative and implement improvement for future students based on anticipated needs, which stimulates overall university performance. In addition, Voon (2008) argue that effective inter-functional coordination provides the focus for the consideration of teamwork, that is, coalitions of interest and information processing, which are critical for the efficient and effective administration of a higher education institution. Therefore, inter-functional coordination remains an enduring factor influencing university performance.

A strong positive and significant association ($r = 0.577; p < 0.01$) was observed between the customer orientation and university performance in the correlation analysis. In the regression analysis, customer orientation emerged as a statistically significant predictor ($\beta = 0.194$; t=4.136; p=0.000) of university performance. These results illustrate that the higher the customer orientation, the better the performance of the university and that customer performance may be used to forecast future university performance. Lindsay and Rodgers (1998) define customers as those who receive the benefit of the product or service and they put their hands in their pockets to pay for it. Both of these conditions can apply to the student as well as the employing organisation. This implies that at the simplest level, universities can regard students as their customers and those who enter into relationships with higher education institutions (Asaad *et al.,* 2008). However, the role of other stakeholders, such as society, donors and government, should not be disregarded due to the influential role they play towards student's wants and preferences (Penceliah, 2004). A higher education institution performs a service to its constituents and is obligated to create a harmonious effort to fulfil the needs of its customers and retain them (Liou and Chen, 2006). Since market orientation is the operationalisation and implementation of the marketing concept, it is imperative that the fundamental premise of satisfying the needs and wants of the students be inherent in any basic conceptualisation of university marketing initiative (Lafferty and Hult, 2001). Once this is achieved, a higher quality of service will be rendered, with the outcomes being more competent graduates who are prepared to serve their countries in different capacities. Customer orientation not only leads to the satisfaction of students, but other important stakeholders as well, compelling them to maintain their service to the university (Naude and Ivy, 1999). Thus, there can be no superior university performance without improved customer orientation.

In the correlation analysis, there was a moderate positive and significant correlation ($r = 0.450$; $p < 0.01$) between the fourth factor; market intelligence dissemination, and university performance. The results of the regression analysis indicate a statistically insignificant association ($\beta = 0.017$; t=0.411; p=0.681) between market intelligence dissemination and university performance. By implication, an increase in market intelligence dissemination may trigger moderate increases in university performance, but it does not predict university performance. According to Lafferty and Hult (2001), part of the organisations ability to adapt to market needs depends on how effectively it communicates and disseminates market intelligence among the functional areas. In universities, the information gathered through market intelligence generation has to be disseminated throughout the university both hierarchically and horizontally (Gray, Osborne and Mathear, 2000). Although information may be readily available, most higher education institutions find it difficult to disseminate market intelligence that will assist them to develop a quality image, which is a prerequisite to achieve sustainable competitive advantage in international education (Caruana *et al.,* 1988). The benefits of intelligence dissemination include ensuring that employees are better able to make important decisions when armed with information affecting those decisions; (2) representing a powerful feedback mechanism to help organisational members realise how their activities are affecting key performance indicators; (3) enhancing the ability of frontline employees to provide other organisational members and customers with useful information and better service, and (4) building trust by functioning in a transparent manner through openly sharing with members' information on their strategy, financial performance and expenditure (Bansal *et al.* 2001). Higher education institutions must therefore adapt to market needs through communicating and dissemination of market intelligence amongst their various functional areas in order to improve their performance (Gray *et al.,* 2000).

In the correlation analysis, a moderate positive and significant association ($r = 0.423$; $p < 0.01$) was observed between intelligence response design and university performance. In the regression analysis, ($\beta = 0.134$; t=2.942; p=0.003), intelligence response design was statistically significant. Response design is one of the aspects relating to a successful response to the information generated about the market (Lings and Greenly, 2005). Response design takes the form of selecting targets markets, designing services that cater to current and anticipated needs and promoting the services in a way that elicits favourable customer response (Zebal and Goodwin, 2012). In the higher education industry, response design involves the planning of programmes based on the needs of students, community, business and industry because of generated and disseminated market intelligence (Tettey, 2010). Intelligence response design is applicable to universities that continually seek to provide superior value (relative to competitor) for stakeholders and seeks to accomplish university goals (Hammond *et al.,* 2006). As described by Narver and Slater (1990), a market-oriented organisation is one that is committed, systematically and entirely, to the continuous creation of superior value to customers and stakeholders such as market specific. Thus, in order to ascertain whether the responsive actions in place have a positive or negative effect on the customers, continuous monitoring of the target customers reactions seems necessary in order to improve performance (Asaad *et al.,* 2008).

A strong positive and significant association ($r = 0.593$; $p < 0.01$) was observed between intelligence response implementation and university performance. In the regression analysis, intelligence response implementation emerged as a predictor of university performance ($\beta = 0.225$; t=5.110; p=0.000). Intelligence response implementation involves the application of programmes geared towards the student or industry as a result of response design (Penceliah, 2004). A core business of any higher education institution is its development of the curricula, which remains a greatest challenge to universities (Reddy, 2004). In line with this, universities have the challenge of designing and aligning their marketing such that it reflects their core purpose in developing curriculum (Maringe, 2005). The model of market orientation includes students' complaints and comments in order to put more weight on timeous responsiveness. Student's complaints and comments should be encouraged as they assist an organisation to evaluate itself and perform well (Letseka and Pitsoe, 2013). An ideal and holistic approach would be to develop responses to the internal environment as well as the external market. Finally, responsiveness addresses the execution of a plan of action or market focused strategy (Zebal and Goodwin, 2012:345). It means implementing and altering products and services in response to customers' current and future needs (Zebal, 2003). Therefore, the implementation of intelligence response to changes taking place in higher education has an important bearing on the performance of the university.

The seventh factor, interdepartmental dynamics was moderately and significantly associated ($r = 0.459$; $p < 0.01$) to university performance. In the regression analysis, interdepartmental dynamics did not predict university performance ($\beta = 0.086$; t=1.954; p=0.051). Caruana *et al.* (1998) affirm the importance of interdepartmental dynamics in the sense that market orientation is an organisation-wide prescription that demands that the whole institution should be coordinated in order to satisfy customer needs. Lafferty and Hult (2001) add that all departments should be responsive and this should take the form of selecting the appropriate markets. Interdepartmental dynamics is closely linked to the intensity of market orientation within an institution (Kohli and Jaworski, 1990). This entails the existence of affinity and understanding among departmental members (Flavian and Lozano, 2006). Consequently, the capability of higher education institutions to achieve the cooperation of the different units in market value generation has a positive effect on market orientation behaviours that impact on overall performance. Trueman (2004) further argues that the existence of cohesion makes the generation of market information and its dissemination within the organisation possible and facilitates the development of a rapid response to this information. Therefore, it is reasonable to support that an interdepartmental orientation should be incorporated as a component of market orientation within the higher education sector in order to enhance university performance.

6. Conclusions and Managerial Implications

The study confirms that market orientation exerts a positive influence on university performance in South Africa. Seven fundamentally distinct but interrelated market orientation elements that are prevalent in universities of technology were identified using the exploratory factor analysis. These were market intelligence generation, inter-functional coordination, customer orientation, market intelligence dissemination, intelligence response design, intelligence response implementation and interdepartmental dynamics. Results of the Pearson correlation analysis indicated that all seven market orientation factors are positively and significantly associated with university performance. However, regression analysis indicated that only four market orientation factors, namely inter-functional coordination, customer orientation, market intelligence dissemination, and intelligence response design predicted university performance. Among these seven market orientation factors, intelligence response design emerged as the most important factor influencing university performance.

This study is not without viable implications for both academics and practitioners. On the academic front, this study makes a significant advancement in the marketing theory by systematically examining the influence of market orientation on university performance. From a theory point of view, a contribution is made to the existing literature on the relationship of market orientation and university performance. The study also contributes a new direction in the research on market orientation by opening up a debate on the importance of market orientation practices in the development and improvement of university performance in South Africa. On a broader and practical perspective, the study reaffirmed the assertion that superior university performance is influenced by the degree of market orientation inherent in HEIs. Thus, administrators and marketing practitioners within universities can apply a proportionate and appropriate mix of the market orientation elements identified in this study to either diagnose performance problems or increase the overall performance of their universities.

7. Limitations and Implications for Further Research

The study has several limitations that have to be highlighted. First, the results of the study may not be generalised to the broader South African higher education institutions' academic population since a non-probability convenience sampling method was used and the data were exclusively collected from universities of technology. In future studies on similar issues, larger numbers of respondents could be enlisted using probability sampling approaches, which enhances the degree to which the results may be generalised to the broader South African Higher education environment. Second, the use of academics alone to measure the relationships among the constructs could have affected the validity of the responses since academics might not been fully aware of some or all market orientation practices and might have given inaccurate responses. In view of this, future research efforts should obtain representative samples, which also include non-academics from more institutions that include comprehensive and traditional universities. Third, a single cross sectional research design was adopted in the study, which accordingly lacked the depth of a longitudinal study. A longitudinal design is recommended in similar studies in the future, as it would provide valuable information concerning any changes in the relationship between the constructs at different periods of time. Another limitation concerns the use of a single method of data collection. All the data in the study were collected quantitatively, which led to common method bias inherent to quantitative methods. To mitigate the effects of common method bias in future studies, it is recommended that the mixed method approach, which integrates both quantitative and qualitative methods be used in data collection.

REFERENCES

Akojee S., McGrath S. (2008) The modelling of public FET College in South Africa: issues for policy and practice, *Journal of Education,* 45:131-154.

Akonkwa B.M. (2013) Beyond market orientation: an operationalization of stakeholder orientation in higher education, *African Journal of Marketing Management,* 5(3): 68-81.

Alhakimi W., Baharun R. (2010) An integrative model of market orientation constructs in consumer goods industry: empirical evidence, *International Management Review,* 6(2): 40-54.

Arnolds C.A., Stofile R.N., Lillah R. (2013) Assessing the outcomes of the higher education mergers in South Africa: Implications for strategic management, *Acta Commercii,* 13(1): Art. #175, 11 pages. http://dx.doi. org/10.4102/ac.v13i1.175.

Asaad Y., Cohen G., Melewar T.C. (2008) Antecedents and consequences of market orientation in universities: literature review and conceptual framework. Conference proceedings, *Academy of Marketing Conference,* 7-8: 1-11.

Badat S. (2015) Institutional combinations and the creation of a new higher education institutional landscape in Post-1994 South Africa. In Curaj, J., Georghiou, L., Harper, J.C. & Egron-Polak, E. (2015) *Mergers and alliances in higher education: international practice and emerging opportunities*. London: Springer. pp 175-204.

Bakewell C.J., Gibson-Sweet M.F. (1998) Strategic marketing in a changing environment: are the new UK universities in danger of being stick in the middle? *The International Journal of Educational Management,* 12(3): 103-107.

Bansal H.S., Mendelson, M.B., Sharma, B. (2001) The impact of internal marketing activities on external marketing outcomes, *Journal of Quality Management,* 6: 61-76.

Bradley N. (2010) Marketing research: tools and techniques, 2nd ed., Oxford University Press, New York.
Burns A.C., Bush, R.F. (2010) *Marketing Research,* Prentice Hall, Upper Saddle River, New Jersey.
Cabrera F.A., Colbeck C.L., Terenzeni P.T. (2001) Developing performance indicators for assessing classroom teaching practices and student learning: the case of engineering, *Research in Higher Education,* 42(3): 327-352.
Carr J.C., Lopez T.B. (2007) Examining market orientation as both culture and conduct: modelling the relationships between market orientation and employees' responses, *The Journal of Marketing Theory and Practice,* 15(2): 113-125.
Caruana A., Ramaseshan B., Ewing M.T. (1998) Do universities that are more market oriented perform better? *International Journal of Public Sector Management,* 11(1): 55-70.
Day G.S. (1994) The capabilities of market-driven organizations, *Journal of Marketing,* 8(4): 37-52.
Denis D.J. (2011) Multiple linear regression using SPSS. Viewed 20 August 2014 from: http://psychweb.psy.umt.edu//denis/datadecision/front/stat_II_2011/psyx_521_multiple_regression_part_II.pdf.
Divala J.J. (2014) Part 2: Being and belonging in South African Higher Education: the voices of black women Academics. *South African Journal of Higher Education,* 28(6): 1959-1960.
Drysdale L. (1999) Marketing or market orientation: what is the difference? *Journal for Gustation Primary School Teachers,* 4(3): 28-29.
Dube L., Ngulube, P. (2013) Pathways for retaining human capital in academic departments of a South African university, *South African Journal of Information Management,* 15(2): Art. #560, 8 pages. http://dx.doi.org/10.4102/ sajim.v15i2.560.
Ellis P.D. (2006) Market orientation and performance: A meta-analysis and cross-national comparisons, *Journal of Management Studies,* 43(5): 1089-1107.
Field A. (2005) Discovering statistics using SPSS, 2nd ed, Sage Publications: London.
Flavian C., Lozano, J. (2006) Organisational antecedents of market orientation in the public university system, *International Journal of Public Sector,* 19(5): 447-467.
Gillard E., Saunders S., Terblanche J., Sukel M. (2012). A review of four case studies in restructuring the South African Higher Education System, viewed 2 November 2015, from http://ahero.uwc.ac.za/index.php?module=cshe&action=viewtitle&id=cs he_842.
Gray B., Osbrone P., Mateear S. (2000) Are service firms more market oriented? Visionary Marketing for the 21stCentury, *Facing the Challenge,* 491): 432-436.
Gultig J. (2000) The university in post-apartheid South Africa: new ethos and new divisions. South African, *Journal of Higher Education,* 14(1): 37-52.
Hall, M. (2015) Institutional culture of mergers and alliances in South Africa. In Curaj, J., Georghiou, L., Harper, J.C. & Egron-Polak, E. (2015) *Mergers and alliances in higher education: international practice and emerging opportunities*. London: Springer. pp 145-174.
Hammond K.L., Webster R.L., Harmon H.A. (2006) Market orientation, top management emphasis and performance within university schools of business: implications for universities, *Journal of Marketing Theory and Practice*, 14(1): 69-85.

Hammond K.L., Webster R.L., Harmon H.A. (2009) The impact of market orientation towards students and student/faculty ratios on performance excellence in the case of AACSB-international member schools, *Academy of Marketing Studies Journal,* 13(2): 1-15.

Hay D., Monnapula-Mapesela M. (2009) *South African higher education before and after 1994, higher education in South Africa: a scholarly look behind the scenes*, Stellenbosch: Sunmedia, 3-20.

Hemsley-Brown J., Oplatka I. (2010) Market orientation in universities, *International Journal of Educational Management,* 24(3): 204-220.

Ivy J. (2001) Higher education institution image: a correspondence analysis approach, *The International Journal of Educational Management,* 15(6): 276-282

Jaworski B.J., Kohli A.K. (1993) Market orientation: antecedents and consequences, *Journal of Marketing,* 57(3); 53-70.

Kaynak E., Kara A. (2004) Market orientation and organizational performance: a comparison of industrial versus consumer companies in mainland China using market orientation scale (MARKOR), *Industrial Marketing Management,* 33(8): 743-753.

Kock N., Lynn G.S. (2012) Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations, *Journal of the Association for Information Systems,* 13(7): 546–580.

Kohli A.K., Jaworski B.J. (1990) Market orientation: the construct, research propositions, and managerial implications, *Journal of Marketing,* 54(2): 1-18.

Kumar K. (2014) Market orientation, organisational competencies and performance: an empirical investigation of a path-analytic model, *Journal of International Marketing,* 13(1): 58-88.

Lafferty B., Hult G.T.M. (2001) A synthesis of contemporary market orientation perspectives, *European Journal of Marketing,* 35(1/2): 92-109.

Leedy P.D., Ormrod E.O. (2014) *Practical research: planning and design,* Pearson Education, Essex.

Letseka M., Pitsoe M. (2013). Reflections on assessment in Open Distance Learning (ODL): the case of the University of South Africa (UNISA), *Open Praxis* 5(3): 197-206.

Lindsay G., Rodgers T. (1998) Market orientation in the UK Higher Education Sector: the influence of the education reform process 1979-1993, *Quality in Higher Education,* 4(2): 159-171.

Lings I., Greenly G. (2005) Measuring internal market orientation, *Journal of Service Research,* 7(3): 71-94.

Liou T., Chen C. (2006) Subjective appraisal of service quality using fuzzy linguistic assessment, *Journal of Quality and Reliability Management,* 23(8): 928-943.

Ma J., Todorovic Z. (2011) Making University relevant: MO as a dynamic capability within institutions of Higher learning, *Academy of Marketing Studies Journal,* 15(2): 1-15.

Mafini C. (2014) Tracking the employee satisfaction-life satisfaction binary: The case of South African academics, *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde, 40*(2): Art. #1181, 11 pages. http:// dx.doi.org/10.4102/sajip. v40i2.1181.

Malhotra N.K. (2010) *Marketing research: an applied orientation,* 6th ed, Eaglewood Cliffs, Prentice-Hall.

Maringe F. (2005) Interrogating the crisis in higher education marketing: the CORD model *International Journal of Education Management,* 19(7): 564-578.

Mazzarol T. (1998) Critical success factors for international education marketing, *International Journal of Education Management,* 12(4): 163-175.

Mbali, C Against journal articles for measuring value in university output, *South African Journal of Higher education,* 24(5), 745–757.

McDaniel C., Gates, R. (2010) Marketing research essentials, 7th ed, USA, John Wiley.

Narver J., Slater S. (1990). The effect of market orientation on business profitability, *Journal of Marketing,* 54(4): 20-35.

Naude P., Ivy J. (1999) The marketing strategies of universities in the United Kingdom, *The International Journal of Education Management,* 13(3): 126-134.

Notshulwana V. (2011) Expanding opportunity through international equity, *Africa Insight* 41(2): 142-159.

O'Connell M. (2001) Market orientation: the implementation of the marketing concept, *ITB Journal,* 3(2): 4-15.

Odhav K. (2009) South African post-apartheid Higher Education policy and its marginalisations: 1994-2002, *South African Education Journal,* 6(1): 33-57.

Perreault W.D., McCarthy E.J. (2002) *Basic marketing: a global managerial approach*, New York: Irvin McGraw-Hill.

PricewaterhouseCoopers. (2014) Moving forward: trends in annual reporting by South African public universities, A review of annual reporting by South African public higher education institutions 2010-2012.

Reddy J. (2004) *Higher Education and social transformation: South African case study*, Republic of South Africa.

Rindfleish J.M. 2003. Segment profiling: reducing risk in higher education management, *Journal of Higher Education Policy and Management,* 25(2): 147-159.

Rivera-Camino J., Ayala, V.M. (2010) Market orientation at universities: construct and exploratory validation, *Innovar,* 20(36): 1-15.

Rodriguez R.G., Cano C., Carrillat F.A., Jaramillo F. (2004) A meta-analysis of the relationship between market orientation and business performance: evidence from five continents, *International Journal of Research in Marketing,* 21(2): 179-200.

Samuel M.O., Chipunza C. (2013) Attrition and retention of senior academics at institutions of higher learning in South Africa: The strategies, complexities and realities, *Journal of Social Science, 35*(2): 97-109.

Sin Y.M.L, Tse B.C.A., Yau H.M.O., Chow M.P.R., Lee, S.Y.J. (2005) Market orientation, relationship orientation and business performance: the moderating effects of economic ideology and industry type, *Journal of International Marketing* 13(1): 36-57.

Sedgwick R. (2004) Institutions of higher education in South Africa after the mergers, viewed 13 august 2014 from: http//www.wes.org/ewenr/04 May 2013/Feature.htm.

Slater S., Narver J. (1994) Market orientation, customer value and superior performance, *Business Horizons,* 37(2): 22-28.

Tettey W.J. (2010) Challenges of developing and retaining the next generation of academics: Deficits in academic staff capacity at African universities, viewed 29 0ctober 2015, from: http://www.foundation-partnership.org/pubs/pdf/tettey_deficits.pdf.

Trueman K. (2004) Market-orientation and local government: barriers and constraints, *Political Studies Association,* (1): 1-12.

Van Staden A. (2010) Assessing the unique contribution and development of universities of technology through the use of performance indicators, *Kagisano,* 7: 164-197.

Van Straaten-Theron A., Dodd N.M. (2011) Organisational commitment in a post-merger situation, *South African Journal of Economic and Management Sciences* 14(3): 333-345.

Veldsman S. (2014) A Strategic approach to scholarly research in South Africa. Academy of Science of South Africa. Viewed 1 November 2015 from: http://liasa.org.za/sites/default/files/notices/LvH%20-%20CSIR%20presentation%20Oct%202014%20(updated).pdf.

Voon B.H. (2008) SERVMO: a measure for service-driven market orientation in higher education, *Journal of Marketing for Higher Education,* 17(2): 216-237.

Zebal M.A., Goodwin D.R. (2012) Market orientation and performance in private universities, *Marketing Intelligence and Planning,* 30(3): 339-357.

Zebal M.A. (2003) A synthesis model of market orientation for a developing country: the case of Bangladesh, Doctoral Thesis, Victoria University of Technology: Melbourne Australia.

ROMANIAN ECONOMY PROFILE BASED ON A STOCHASTIC ANALYSIS

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Abstract. The paper captures, based on a simplified, small-size dynamic stochastic general equilibrium model and on Bayesian instruments, the evolution of the Romanian economy since the beginning of this century. The depicted economy is governed by basic representative agents: household, firm, financial organism, embodied by banks, and monetary authority, playing a subsidiary role. Two shocks are considered, the technology real shock and the money stock nominal shock, both of them impacting the economy and changing the trajectory of the relevant economic variables. The steady-state return time of the model variables and the estimates of the parameters allow us to set the pattern of future economic trends and to make pertinent decisions so as to attain sustainable macro-stabilization.

JEL classification: C61, D12, D22

Keywords: stochastic analysis, Bayesian approach, steady-state of variables, technology and money stock impulse, general equilibrium

1. Introduction

The dynamic stochastic general equilibrium models are nowadays largely approached and debated, being used in combination with econometric techniques in order to generate estimations (Smets and Wouters, 2003) or to make predictions (Christoffel et al., 2007) at macroeconomic level.

Following the classical line, by resorting to the Real Business Cycle model (Kydland and Prescott, 1982), with perfectly competitive markets characterised by flexible prices and wages, or to the Keynesian one, by making use of a New Keynesian model (Rotemberg and Woodford, 1997), considering monopolistic markets with sticky prices (Calvo, 1983) or wages (Erceg, 2000) and, most important, taking into account the rationality of representative economic agents, focussed on the maximisation of their benefits, and the structural shocks hitting the economy, such models became a reference point for economists all over the world.

Considering the most recent such approaches, we could mention several important works, having brought additional knowledge to the existing literature.

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Trying to capture the increasing level of unemployment caused by the economic crisis, Christiano et al (2010) resorts to a DSGE model, ignoring the wage stickiness, while preserving the Calvo price rigidity, creating a mix between the Real Business Cycle and New Keynesian model, the results being suggestive from the economic perspective.

Sargent and Surico (2011) undertake to analyse the relationship between the interest rate and the inflation rate, on one hand, and the increase of the money supply, on the other hand, deducing, via a DSGE model with sticky prices, the instability of the former low frequency regressive parameters.

Lees et al. (2011) uses the forecasting feature of a DSGE model, more specifically the conditioned predictive technique, therefore testing in real time, while developing the model, the relevance of successive forecasts.

Smets et al. (2014) also uses the predictive function of this type of models, capturing the influence exercised by individual forecasts relating to the interest rate, the inflation rate and the gross domestic product on the overall predictive performance, while Merola (2015) makes appeal to the the most recent element considered when approaching the DSGE models, the financial accelerator, revealing the role of the financial mechanisms in translating the dysfunctions of the financial markets onto the real economy.

Destined for academic purposes or for theoretical economic analyses, these models quickly expanded, getting into the real economic life as an effective macroeconomic, particularly monetary policy instrument, being at present adopted and developed by the Central Banks of various countries.

Although widely used abroad, their echo delayed at the level of Romania, just few attempts being visible in this respect. The cornerstone for the national economy will be indubitable the model under construction of the National Bank of Romania, lately started, model meant to help the related authority to make best economic decisions. Until its finalisation, there will be a considerable lack of significant information in this area, reason for which I decided to dedicate myself to their analysis, as in Hudea (2012, 2014, 2015) among many others.

The present approach comes to add value to the information arising from the implementation of the DSGE models to the Romanian economy, not only by providing pertinent outcomes as result of the Bayesian estimation process, but also, especially, by insisting on the impact on the model variables of two highly important shocks that determine structural changes in the short and in the long run.

Given the above-mentioned, we decided to resort in this paper to a brief version of a dynamic stochastic general equilibrium model developed by Schorfheide (2000), model that assumes the existence of a continuous series of representative economic agents acting on the market: household, firm and commercial bank. The presence of the monetary authority is also considered, it having, however, a lower influence on the real variables of the economy. The latter are impacted by two types of shocks, a real one, the shock on technology and a nominal one, the shock on the stock of money.

Once the model is implemented in Matlab, the Metropolis-Hastings algorithm is called so as to generate, based on a Bayesian approach, the posterior distribution of the model parameters, allowing us to construe the same. The impulse-response functions are also rendered in order to capture the reaction of the model variables when hit by a structural shock.

The following section presents the model, Data, Methodology and Results section provides information about the data and the techniques used, displays the model output and generates related discussions, while Conclusions make a summary of the above-mentioned.

2. Model description

The model approached in this paper is a simplified version of the one developed by Schorfheide (2000) and rendered by Griffoli (2007) in his attempt to lay the groundwork of the dynamic stochastic general equilibrium modelling.

Given the relatively high length of such model, we exclusively present hereinafter the first order conditions arising from the maximisation problems, solved considering the model variables at steady state, when the time index is lost, the remainder of the model as well as the significance of model variables and parameters being detailed in Appendix 1.

Thus, the model FOCs are:

- the Euler equation of consumption

$$E_t\left[\frac{\overline{P}_t}{\overline{C}_{t+1}\times\overline{P}_{t+1}\times m_t}\right]=-\beta\times e^{-\alpha\times\left(\gamma+\varepsilon_{A,t+1}\right)}\times P_{t+1}\times\frac{\alpha\times\overline{K}_t^{\alpha-1}\times N_{t+1}^{1-\alpha}+\left(1-\delta\right)}{\overline{C}_{t+2}\times\overline{P}_{t+2}\times m_{t+!}} \tag{1}$$

- the Euler equation of crediting

$$\frac{1}{\overline{C}_t\times\overline{P}_t}=\beta\times\left[\left(1-\alpha\right)\times\overline{P}_t\times e^{-\alpha\times\left(\gamma+\varepsilon_{A,t+1}\right)}\times\frac{\overline{K}_{t-1}^{\alpha}\times N_t^{1-\alpha}}{\overline{W}_t}\right]\times\frac{1}{E_t\left[\overline{L}_t\times m_t\times\overline{C}_{t+1}\times\overline{P}_{t+1}\right]} \tag{2}$$

- the borrow-related constraint of firms

$$\overline{W}_t=\frac{\overline{L}_t}{N_t} \tag{3}$$

- the aggregate resource-related constraint

$$\overline{C}_t+\overline{K}_t=e^{-\alpha\times\left(\gamma+\varepsilon_{A,t}\right)}\times\overline{K}_{t-1}^{\alpha}\times N_t^{1-\alpha}+\left(1-\delta\right)\times e^{-\left(\gamma+\varepsilon_{A,t}\right)}\times\overline{K}_{t-1} \tag{4}$$

- the production function of firms

$$\overline{Y}_t=e^{-\alpha\times\left(\gamma+\varepsilon_{A,t}\right)}\times\overline{K}_{t-1}^{\alpha}\times N_t^{1-\alpha} \tag{5}$$

- the inter-temporal labour market equation

$$\frac{\psi}{1-\psi}\times\frac{\overline{C}_t\times\overline{P}_t}{1-N_t}=\frac{\overline{L}_t}{N_t} \tag{6}$$

- the interest rate equilibrium equation

$$R_t=(1-\alpha)\times\overline{P}_t\times e^{-\alpha\times(\gamma+\varepsilon_{A,t+1})}\times\frac{\overline{K}_{t-1}^{\alpha}\times N_t^{-\alpha}}{\overline{W}_t} \tag{7}$$

- the money market equilibrium equation

$$m_t=\overline{C}_t\times\overline{P}_t \tag{8}$$

- the credit market equilibrium equation

$$\overline{L}_t=m_t-1+\overline{D}_t \tag{9}$$

- the money growth specific shock equation

$$\frac{A_t}{A_{t-1}}=e^{(\gamma+\varepsilon_{A,t})} \tag{10}$$

- the equations linking observables to stationary variables

$$\frac{Y_t}{Y_{t-1}}=e^{(\gamma+\varepsilon_{A,t})}\times\frac{\overline{Y}_t}{\overline{Y}_{t-1}} \tag{11}$$

$$\frac{P_t}{P_{t-1}}=\frac{m_{t-1}}{e^{(\gamma+\varepsilon_{A,t})}}\times\frac{\overline{P}_t}{\overline{P}_{t-1}} \tag{12}$$

3. Data, Methodology and Results

Thirteen final equations of the above-rendered model, namely equations (1) - (12), were selected to be implemented in order to obtain the estimates of the model parameters as well as the impulse response functions of the model variables. The programme used for such implementation was Matlab 7.11.0, with its specific tool dedicated to dynamic stochastic general equilibrium modelling, Dynare 4.3.0.

As this is a simple model, we had just two observable variables, the gross domestic product, respectively the inflation rate, both related data, analysed quarterly, being taken over from the Romanian National Institute of Statistics. The paper had in view a 12-year period, resulting in 48 observations. The data have been used in logarithm and differentiated, the first observation being eliminated.

The estimation process was preceded by the calibration of several parameters, according to personal results obtained in previous studies, while considering the literature in the matter, with a production elasticity in relation to capital (α) of 0.323, as in Almeida (2009) or a subjective discount factor (β) of

0.992 and a capital depreciation rate (δ) of 0.030, as in Andrés et al. (2006). The method used for estimation was based on Bayes theorem, this involving the setting of prior probabilities, with various types of distributions, which provide some initial information about the data before their actual observation (see *Table 1*).

The posterior probabilities, rendered in Matlab, are obtained by resorting to the Metropolis-Hastings algorithm, which is nothing else but a Monte Carlo type method that simulates the distribution of parameters by generating Markov chains representing sequences of possible estimates, the most relevant of them being selected after their filtering based on several rules.

The results obtained on the model implementation are rendered below.

Table 1. Estimation results

Parameter	Prior mean	Mode	Posterior mean	Confidence interval	
γ	0.009	0.009	0.008	0.004	0.012
m^*	1.000	1.000	0.999	0.988	1.010
ρ	0.600	0.950	0.947	0.925	0.964
ψ	0.650	0.629	0.624	0.530	0.691
σ_{ε_A}	0.150	5.872	6.065	5.048	7.296
σ_{ε_M}	0.150	1.130	1.205	0.966	1.430

The intercept of the technology shock equation (γ) is identical to its anticipated value, being quite low, therefore reflecting a high persistence of the related structural shock. As expected, the steady-state money stock growth rate (m^*) maintains to the same value, suggesting its stability over time.

The autoregressive parameter of the monetary stock (ρ) amounts to 0.95, indicating a very strong influence of the money growth level registered in the previous period on its current level, in contradiction with what we had set as prior at the beginning of the estimation process. However, given that such value is less than one, even when considering the upper extreme of the confidence interval, this meaning the absence of the unit root, we deduce the existence of other, less powerful, impacting elements as well.

The persistence of the consumers' habits (Ψ) reaches a value of 0.62, in accordance with the one initially established as per Adolfson et al. (2005), even if a little bit lower than the latter. Its level reveals the perpetuation of such habits in time, yet underlining their changing when affected by various influencing factors.

The volatility of the structural shocks considered ($\sigma_{\varepsilon A}$, $\sigma_{\varepsilon M}$) is extremely high, especially as for the technology shock, evidencing serious variation in this regard at the level of the studied country, for the analysed period, fully complying with the real facts observed during the last decade.

Figure 1, rendered below, reflects the graphical representation of the estimation results presented in *Table 1*, including also the estimates of the calibrated parameters, with their Matlab associated notations: α – alpha, β – beta, δ – delta, γ – gamma, m^* - m_star, ρ – rho, ψ – psi, $\sigma_{\varepsilon A}$ – SE_eps_a and $\sigma_{\varepsilon M}$ – SE_eps_m).

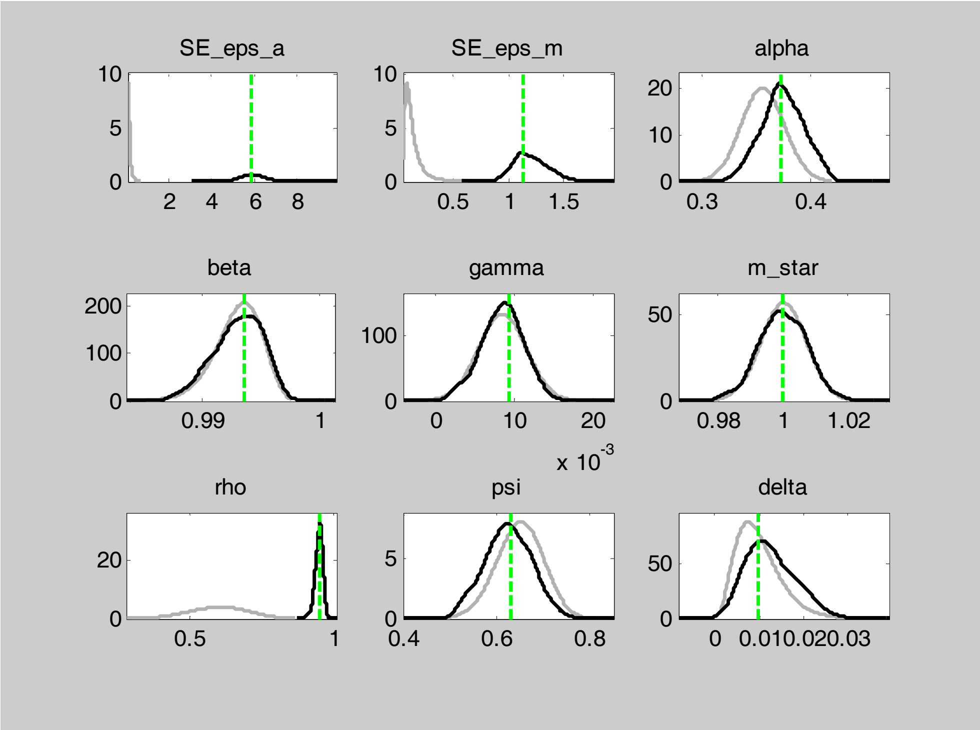

Figure 1. Estimation representation

We remark the similarity existing between the mode arising from the posterior kernel maximization process (the discontinuous line) and the one generated by the Metropolis-Hastings algorithm while determining the posterior distribution of parameters.

The estimation representation graph also reveals some differences, save for the calibrated and m^* parameters, between the prior and the posterior distribution, therefore standing for the relevance of the additional information provided by the evidence.

Figures 2 and *3* below, displaying the output corresponding to the impulse-response function analysis, reflect the reaction of the model variables to the occurrence of the technology shock and of the money stock shock, all notations corresponding to the ones mentioned in Appendix 1, with the specification that small letters indicate their steady state level and that y_bar and p_bar denote $\bar{y}$, respectively $\bar{p}$.

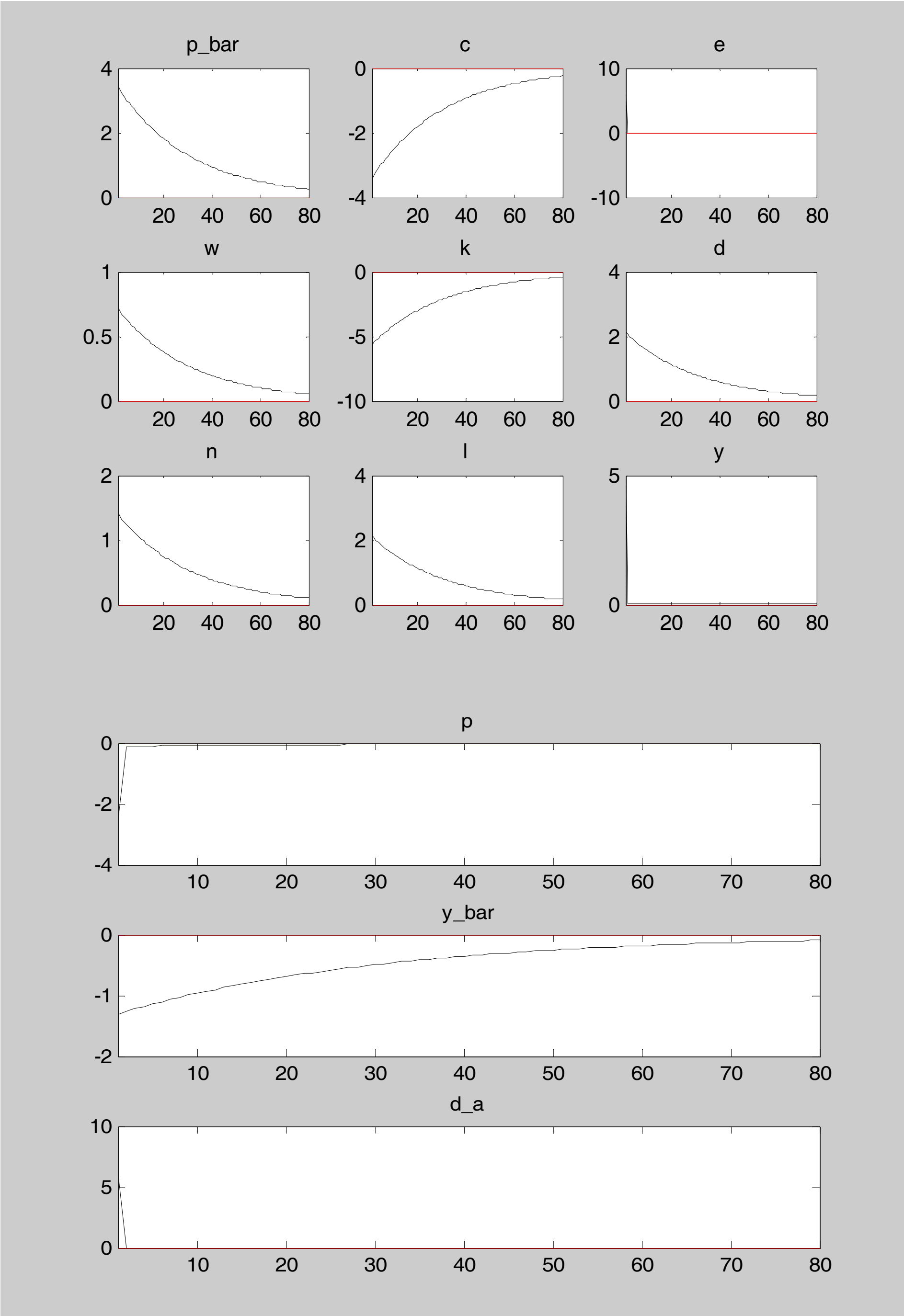

Figure 2. Response of the model variables to a technology impulse

As revealed by *Figure 2*, a positive shock on technology causes a quick drop of the capital stock level, as this one is turned into investments. This can be translated by the orientation of the resources existing in economy rather towards investments, which seem to be more profitable in the long-run, than towards consumption, therefore generating an immediate increase of the first one in the detriment of the latter.

The reaction of the gross domestic product is predictable, the diminishing of consumption being so high that it cannot be fully covered by the augmentation of investments, therefore generating, on short term, an overall lowering of the output.

The significant number of loans granted by the commercial banks to firms, as well as the important number of deposits made by households to commercial banks reflect the exclusive interest of firms in involving in such investments, individual consumers preferring making savings over investing or consuming.

At the bank level, as showed by the graph above, the equilibrium condition is reached, the level of deposits equalising the level of loans. On the other side, higher investments inevitable lead to higher employment and, given the superior technology, to less capital needed for carrying out the production-related activity.

At the same time, a more valuable technology involves more qualified people, the average wage going upward, despite of the increased number of employees. Last, but not least, higher wages generate an increase of the price level, therefore inducing inflation.

Figure 2 above also suggests, with some exceptions, a general recovery by the model variables of their initial position after more that 80 periods since the occurrence of the related shock.

As indicated by *Figure 3*, a positive shock on the money stock causes an increase of the level of prices, irrespective of their nature, be they prices of goods and services, of crediting products or of labour force.

A higher inflation rate, on the other hand, inhibits not only deposits, as expected, but also consumption, the capital stock level going upwards.

Given that the volume of capital exceeds its previous level and the number of employees decreases, we assist to an augmentation of wages.

Following the same pattern as when hit by a technology shock, on the occurrence of a money stock shock, the level of the gross domestic product lowers on short term, the quantum of investments being insufficient for filling the gap left by the decrease of consumption.

Figure 3 shows a quicker return to the steady state of the model variables, in average, after 60 periods subsequent to the production of the money stock shock.

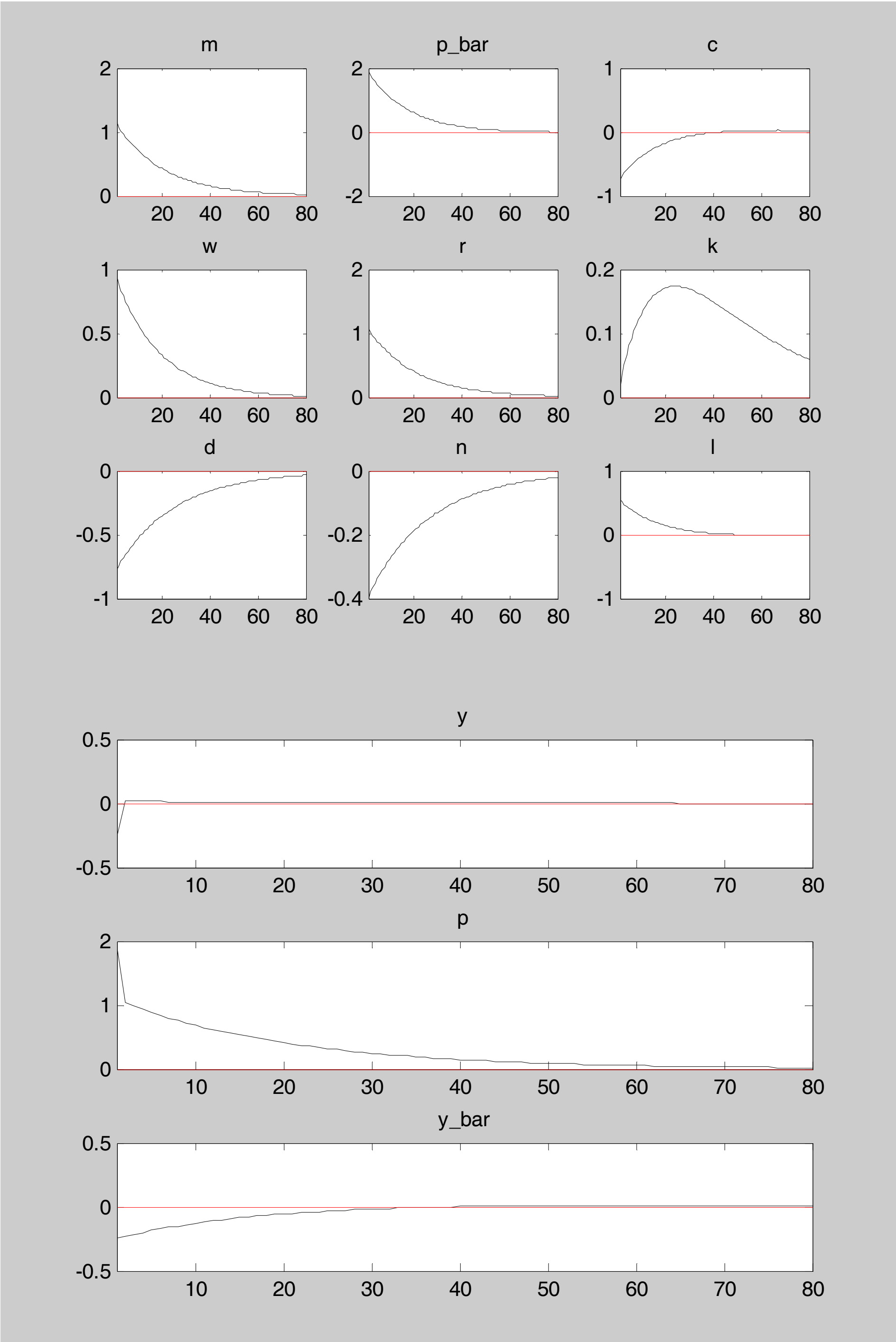

Figure 3. Response of the model variables to a money stock impulse

4. Conclusions

The purpose of the present paper was to diagnose the Romanian economy by means of a simplified version of a small dynamic stochastic general equilibrium model, resorting, in this respect, both to the estimation of the model parameters, by using the Bayes theorem, and to the analysis of the reaction of the model variables to real and nominal structural shocks, by appealing the specific impulse-response functions.

The study reveals, for the covered period of twelve years, a high persistence of the consumers' habits and of the technology shock, a constant money growth rate, the current level of the money growth being strongly influenced by its previous value, as well as a high volatility of the technology and money stock shocks. Also, the discrepancies between the prior and the posterior distributions testify the informative role of data in estimating the model, the setting of priors not being decisive in this regard.

As for the response of the model variables to various impulses, we ascertain an obvious connection between the increase of the technological level and the orientation of the economy resources to investments, the consumption lowering so much that the gross domestic product registers, in the short-run, an overall decrease. Yet, the benefits are clear, considering the diminish of unemployment and the higher wages, the newly created conditions requiring more qualified people and involving an adequate remuneration of the same. The shock on the money stock sets the premises for the augmentation of the prices of goods and services, credits and labour force, the generated inflation restraining people from making deposits and from consuming, the general effect being, as in the previously depicted shock, the decrease of the gross domestic product in the immediately following period.

Such type of study is useful both for outlining the image of an economy, with its specific characteristics, and for making pertinent decisions at microeconomic and macroeconomic level, the latter being mainly related to the construction of efficient fiscal and monetary policies.

In our case study, the Government should take all necessary steps to stimulate consumption, this involving, mainly, investments in infrastructure, with long term positive effects on employment and, implicitly, on increased revenues, as well as reductions of taxes of all kind. The monetary organism, on the other side, should inject more money in economy, therefore determining the lowering of the interest rate and thus decreasing the volume of deposits in favour of consumption. Higher consumption, with increased investments, based on crediting due to a tempting reduced interest rate, will generate a superior value of the gross domestic product, with all its subsequent economic benefits.

REFERENCES

Adolfson M., Laséen S., Lindé J., Villani M. (2005) Bayesian estimation of an open economy DSGE model with incomplete pass-through. Sveriges Riksbank, Working Paper Series no. 179

Almeida V. (2009) Bayesian estimation of a DSGE model for the Portuguese economy, Banco de Portugal, Economics and Research Department, Working Paper Series no. 200914

Andrés J., Burriel P., Estrada A. (2006) BEMOD: A DSGE model for the Spanish economy and the rest of the Euro Area, Bank of Spain, Working Paper Series no. 0631

Calvo G. A. (1983) Staggered prices in a utility-maximizing framework, Journal of Monetary Economics, 12 (3), 383 – 398

Christiano L., Trabandt M., Karl W. (2010) DSGE Models for Monetary Policy Analysis, NBER Working Paper Series no. 16074

Christoffel K., Coenen G., Warne A. (2007) Conditional versus Unconditional Forecasting with the New Area-Wide Model of the Euro Area, Central Bank Workshop on Macroeconomic Modelling, Norges Bank

Erceg C. J., Henderson D. W., Levin A. T. (2000) Optimal monetary policy with staggered wage and price contracts, Journal of Monetary Economics, 46 (2), 281–313

Griffoli T.M. (2007) An introduction to the solution and estimation of DSGE models, available at http://www.dynare.org/documentation-and-support

Hudea (Caraman) O.S. (2012) Dynamic and Stochastic Estimation of the Romanian Economy, based on the New Keynesian Model, SCCECE Journal, 1-2, 107-123

Hudea (Caraman) O.S. (2014) Impulse-Response Function Analysis and Forecasts with a Dynamic Stochastic General Equilibrium Model, ECECSR Journal, 48(3), 99-121

Hudea (Caraman) O.S. (2015) Estimation and Variance Decomposition in a Small-size DSGE Model, Romanian Statistical Review Supplement, 1, 121-127

Kydland F. E., Prescott E. C. (1982) Time to Build and Aggregate Fluctuations, Econometrica, 50 (6), 1345–1370

Lees K., Matheson T., Smith C. (2011) Open economy forecasting with a DSGE-VAR: Head to head with the RBNZ published forecasts, Elsevier: International Journal of Forecasting, 27(2), 512-528

Merola R. (2015) The role of financial frictions during the crisis: An estimated DSGE model, Economic Modelling, 48(1), 70-82

Rotemberg J., Woodford M. (1997), An Optimization-Based Econometric Framework for the Evaluation of Monetary Policy, NBER Chapters. In: NBER Macroeconomics Annual, 12, pp. 297-361

Schorfheide F. (2000) Loss function-based evaluation of DSGE models, Journal of Applied Econometrics, 15(6), 645-670

Smets F., Wouters R. (2003) An Estimated Dynamic Stochastic General Equilibrium Model of the Euro Area, Journal of the European Economics Association, 1(5), 1123-1175

Smets F., Warne A., Wouters R. (2014) Professional forecasters and real-time forecasting with a DSGE model, International Journal of Forecasting, 30(4), 981-995

Sargent T., Surico P. (2011) Two Illustrations of the Quantity Theory of Money: Breakdowns and Revivals, American Economic Review, 101(1), 109-128

Appendix 1

The model considers a continuous series of households j, with $j \in (0,1)$, aiming at maximising their satisfaction, transposed into the solution to the following optimum problem:

$$\max_{C_{j,t}, N_{j,t}, M_{j,t+1}, D_{j,t}} \mathrm{E}_0 \sum_{t=0}^{\infty} \beta^t \times \left[\ln C_{j,t} \times (1-\psi) + \ln\left(1 - N_{j,t}\right) \times \psi\right] \tag{13}$$

where E_0 is the present value expected by household j, β^t, the subjective discount factor, $C_{j,t}$, the consumption of household j, $N_{j,t}$, the labour time of household j and ψ, the consumers' habits

given the cash in advance constraint:

$$P_t \times C_{j,t} \le M_{j,t} + W_{j,t} \times N_{j,t} - D_{j,t} \tag{14}$$

where P_t is the average price of consumption goods, $M_{j,t}$, the money held in cash by household j, $W_{j,t}$, the wage of household j and $D_{j,t}$, the bank deposits of household j

with $$D_{j,t} \ge 0$$

and the inter-temporal budget constraint:

$$M_{j,t+1} = \left(M_{j,t} + W_{j,t} \times N_{j,t} - P_t \times C_{j,t} - D_{j,t}\right) + R_{j,t} \times D_{j,t} + F_{j,t} + B_{j,t} \tag{15}$$

where $R_{j,t}$ is the gross interest rate received for bank deposits by household j, $F_{j,t}$, the firm dividends of household j, $B_{j,t}$, the bank dividends of household j

There is also a continuous series of firms i, with $i \in (0,1)$, fighting to maximise their profit by finding the optimum solution to the following problem:

$$\max_{F_{i,t}, K_{i,t+1}, N_{i,t}, L_{i,t}} \mathrm{E}_0 \sum_{t=0}^{\infty} \beta^{t+1} \times \left[\frac{F_{i,t}}{C_{j,t+1} \times P_{t+1}}\right] \tag{16}$$

where $K_{i,t}$ is the capital stock of firm i, $N_{i,t}$, the labour demand of firm i, $F_{i,t}$, the dividends of firm i, and $L_{i,t}$, the loans of firm i

with $$L_{i,t} \ge W_{i,t} \times N_{i,t}$$

under the constraint:

$$F_{i,t} \le L_{i,t} + P_t \times \left\lfloor K_{i,t}^{\alpha} \times \left(A_{i,t} \times N_{i,t}\right)^{1-\alpha} - K_{i,t+1} + (1-\delta) \times K_{i,t} \right\rfloor - W_{i,t} \times N_{i,t} - L_{i,t} \times R_{i,t} \tag{17}$$

where α is the elasticity of production in relation to capital, $A_{i,t}$, the technological level of firm i, δ, the depreciation rate, and $R_{i,t}$, the credit gross interest rate paid to bank by firm i

with $$K_{i,t}^{\alpha} \times \left(A_{i,t} \times N_{i,t}\right)^{1-\alpha} = Y_{i,t}$$

$$K_{i,t+1} - (1-\delta) \times K_{i,t} = I_{i,t}$$

where, $Y_{,t}$ is the production of firm *i* and $I_{i,t}$, the investments of firm *i*

At the same time, we encounter a continuous series of commercial banks *n*, with $n \in (0,1)$, which, by undertaking, as the above-mentioned firms, to maximise their benefits, solve the following optimum problem:

$$\max_{B_{n,t}, L_{n,t}, D_{n,t}} \mathrm{E}_0 \sum_{t=0}^{\infty} \beta^{t+1} \times \left[\frac{B_{n,t}}{C_{j,t+1} \times P_{t+1}}\right] \tag{18}$$

where $B_{n,t}$ represents the dividends provided to households by bank *n*, $L_{n,t}$, the loans granted to firms by bank *n*, $D_{n,t}$, the deposits made by households at bank *n*, and $X_{n,t}$, the money injected by the Central Bank in bank *n*

with $$L_{n,t} \le D_{n,t} \times X_{n,t}$$

under the constraint:

$$B_{n,t} = D_{n,t} + R_{i,t} \times L_{n,t} - R_{j,t} \times D_{n,t} - L_{n,t} + X_{n,t} \tag{19}$$

By aggregating the microeconomic elements at macroeconomic level, we get the following equilibrium equations, the model variables being denoted hereinafter without their related index:

$$\sum_j W_{j,t} = \sum_i W_{i,t}$$

$$\sum_j N_{j,t} = \sum_i N_{i,t}$$

$$\sum_j R_{j,t} = \sum_i R_{i,t}$$

$$\sum_j F_{j,t} = \sum_i F_{i,t}$$

$$\sum_j D_{j,t} = \sum_n D_{n,t}$$

$$\sum_j B_{j,t} = \sum_n B_{n,t}$$

$$\sum_i L_{i,t} = \sum_n L_{n,t}$$

to which should be added the equations of equilibrium on the market of goods and services and on the money market, as follows:

$$Y_t = C_t + I_t \tag{20}$$

$$P_t \times C_t = M_t + X_t \tag{21}$$

There are two stochastic processes rendered by the shocks affecting the economic variables, the shock on technology, following an AR(1) process, with intercept, and the shock on the money stock growth rate, determined as the average between its steady-state value and its previous period value:

$$\ln A_t = \gamma + \ln A_{t-1} + \varepsilon_{A,t} \tag{22}$$

$$\ln m_t = (1-\rho)\times \ln m^* + \rho \times \ln m_{t-1} + \varepsilon_{M,t} \tag{23}$$

with $\varepsilon_{A,t}$ and $\varepsilon_{M,t}$ normally distributed with zero mean and constant variance.

The model variables are rendered stationary by dividing the same, depending on the case, to the technological level (for the real variables), to the money stock (for the nominal variables) and to the technological level – money stock ratio (for the price variable):

$$\overline{U}_t = \frac{U_t}{A_t}$$

where $$U_t = \{Y_t, C_t, I_t, K_t\}$$

$$\overline{V}_t = \frac{V_t}{M_t}$$

where $$V_t = \{D_t, L_t, W_t\}$$

$$\overline{P}_t = P_t \times \frac{A_t}{M_t}$$

THE MEDIATING INFLUENCE OF PASSENGER SATISFACTION ON THE RELATIONSHIP BETWEEN PASSENGER LOYALTY PROGRAMMES AND PASSENGER LOYALTY

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Abstract. The dynamic nature and the intense competition in the airline industry results in a need to craft innovative mechanisms that enforce customer loyalty. The study focuses on the mediating effect of passenger satisfaction on the relationship between loyalty programmes and passenger loyalty in the airline industry. The study complements previous research by producing evidence on customer loyalty in the airline industry in a developing country context. The regression findings confirm the hypothetical prediction that customer satisfaction mediates the relationship between loyalty programmes and customer loyalty. The results reveal that customer satisfaction leads to customer loyalty and that loyalty programmes positively impact customer satisfaction. The findings have implications for managers of airlines fling routes in Southern Africa who are encouraged to invest in loyalty programmes in order to enforce passenger satisfaction and loyalty. Although previous research has examined customer loyalty and its antecedents, the mediating role played by customer satisfaction on the relationship between customer loyalty programmes and customer loyalty still remains to be further investigated particularly in the context of the airline industry in Southern Africa.

JEL Classification: M10

Key words: airline, service quality, safety reputation, loyalty programmes, customer satisfaction

1. Introduction

It is now a generally agreed view among services marketing practitioners and scholars that customer loyalty is a critical competitive tool. Customer loyalty reduces marketing costs and ensures positive word of mouth. Loyal customers perceive low risks in trying new products/services and make useful suggestions to improve the service (Wallace, Giese & Johson, 2004; Bushoff & Du Plessis, 2009). It is now imperative to enhance passenger loyalty because the airline industry is

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now very dynamic and competitive. Over the years, the airline industry has become so dynamic and hyper competitive that it is now imperative to enhance passenger loyalty. The airline management is investing in programmes which help in enhancing passenger loyalty. To the academics, it has also become crucial to conduct studies that would provide more insights about creating and sustaining customer loyalty (Han & Ryu, 2009). The literature has revealed that satisfied customers are likely to be loyal to the service provider (Lin & Wang, 2006) and that service quality leads to customer loyalty (Hamadi, 2010). According to Lee (2004), loyalty programmes are also crucial in enhancing customer loyalty. It is therefore the responsibility of airline managers to devise mechanisms which enforce and sustain passenger loyalty. This also calls for more research studies that need to inform airline management and practitioners in other industries how to effectively achieve and maintain customer loyalty.

Although previous research has examined customer loyalty and its antecedents, the mediating role played by customer satisfaction in the relationship between customer loyalty programmes and customer loyalty still remains to be further investigated particularly in the context of the airline industry in Southern Africa. Evidently, a cross examination of the literature indicates that research on the mediating influence of customer satisfaction on the relationship between loyalty programmes and customer loyalty to airline operators is scarce in the African context. In addition, the majority of the studies examining the mediating role of customer satisfaction in these two variables have been carried out in American, European and Asian countries (Kaura, Prasad and Sharma, 2015; Vesel and Zabkar, 2009). Perhaps, it may not be informative to assume *a priori* that the results of similar studies conducted in these developed and emerging economies can apply to a developing country like Zimbabwe. The behaviours of consumers in Western and Asian countries may not predict the behaviour of consumers in developing countries. In the light of the identified research gap, this study aimed to close this gap by exploring the mediating influence of customer satisfaction in the relationship between customer loyalty programmes and customer loyalty to airline service providers in Southern Africa.

By exploring the mediating role of customer satisfaction in the relationship between loyalty programmes offered by airline providers and customer loyalty, the findings of this study have implications for managers of airlines flying routes in the Southern African region. Practical insights will be provided on how to provide loyalty programmes in order to gain customer satisfaction which will ultimately lead to customer loyalty. Such insights are important because they can enhance the competitiveness of airlines as the industry is now operating in a highly competitive market. The study's theoretical contribution entails the development of a conceptual framework showing the relationships between customer satisfaction, customer loyalty programmes and customer loyalty.

The paper proceeds as follows: Firstly, literature review, and the theoretical framework will be presented. Secondly, the methodology used to achieve the research objective will be provided. The methodology section will be followed by the presentation and analysis of the results. The paper will be concluded by the managerial implications, limitations and avenues for future research.

2. Theoretical background

Customer loyalty programmes

A Customer loyalty programme can be defined as a well-coordinated and membership based marketing strategy, designed to provide incentives to customers in order to strengthen the continued marketing exchanges with the customers and get their allegiance (Gómez *et al*. 2006; Lacey and Sneath 2006). Firms in travel related industries such as airlines offer customer loyalty programmes (also referred to as Frequent Flyer programmes - FFPs) to encourage repeat purchasing thereby improving customer retention rates by offering incentives for customers to purchase more regularly and in larger volumes (Lewis 2004). The second aim of FFP is to create stronger bonds between the current customers and the brand so as to retain the customer base (Uncles, Dowling and Hammond (2003). FFP offer rewards in the form of class upgrades, free flights or other travel related services. Travellers need to accumulate a certain number of points to get the prescribed benefits which imply that once a customer starts accumulating points they are encouraged to continue flying with the same airline to maximize the benefits they receive from the loyalty programme and increase chances of reaching the thresholds (Lewis 2004). Signing up for a number of FFPs may result in many worthless air miles spread across a number of programmes because rewards in FFPs are based on cumulative miles covered with the sponsoring airline (Basso, Clement and Ross 2009).

While frequent flier programmes on most airlines reward frequent fliers with air miles, some airlines are loading additional benefits as a way of encouraging repeat purchases. For example British Airways' Executive Club offers its members both air miles and extra points which go towards earning a Gold or Silver tier status (British Airways, 2015). Gold status entitles members to first class check-in facilities, priority reservations and priority boarding irrespective of the cabin they are booked to fly (British Airways 2015).

FFPs are increasingly popular with airlines as they are used to appeal to different passenger segments (Meyer-Waarden, 2013). Uncles *et al.* (2003) argue that one of the compelling reasons for the increase in the number of FFP is persuasive pressure generated by alleged success of existing programmes and airline managers are generally reluctant to withdraw the programmes once they have been introduced even when the benefits they claimed have not been realised. The increasing importance of these programmes have generated a lot of interest from researchers but the lack of consensus on their impact on consumer behaviour makes FFPs a key variable for this study.

Customer Satisfaction

According to Szczepańska and Gawron (2011) a customer's level of satisfaction with a product/service they have purchased is shaped by his/her subjective evaluation of the product/service, the value of the benefits they have received and the customer's overall interaction with the company. In the same vein Giese and Cote (2000) argue that customer satisfaction is a response to specific purchase or consumption related event occurring at a particular time. Kotler and Keller (2012) highlight that satisfaction reflects an individual's judgement of a product's perceived performance compared to expectations. The customer is disappointed if performance falls short of expectations, satisfied if expectations are matched and delighted if performance exceeds expectations (Kotler and Keller 2012). Dehghan and Shahin (2011) opine that where real alternatives exist, inability to satisfy customers is through two response mechanisms: exit and voice.

Customer Loyalty

Customer loyalty is an important element of organisational success and profitability (Oliver 1997; Divett *et al.* 2003) because consumers that demonstrate the highest levels of loyalty towards a service are more inclined to repurchase the service more often and spend more (Dehghan and Shahin 2011). In the same vein Kotler and Keller (2012) argue that when customers become loyal to a brand, demand becomes more predictable and secure for the firm consequently creating barriers to entry for other firms. Retaining profitable and frequent fliers is an attractive proposition for every airline because as cited by Kotler and Keller (2012) marketing experts Peppers & Rogers (2005) highlight that businesses succeed by getting, retaining, and growing customers. Dehghan and Shahin (2011) observe that some researchers use the word customer loyalty instead of brand loyalty to indicate that loyalty is a characteristic of people, as opposed to being something inherent in brands. By studying loyalty in the hotel sector Palmer, McMahon-Beattie and Beggs (2000) observe that true loyalty based on emotional bonds is difficult to copy, implying that it can be a source of competitive advantage. In the same vein Schieffer (2005) is of the view that creating loyal customers is core to every business.

Oliver (1999, p.34) defines loyalty as “a deeply held commitment to rebuy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour.” According to this definition loyal customers are inclined to ignore any persuasive inducements in the form of messages and incentives from competitors. Dehghan and Shahin (2011) identified five dimensions of loyalty from services literature namely repeat purchase of a service, resistance to switching, provision of positive word-of-mouth, identifying with a service and preference for a particular service provider. This study uses the term customer loyalty as opposed to brand loyalty, so as to emphasise that loyalty is a characteristic of people as opposed to being something that is inherent in brands (Uncles, Dowling and Hammond 2003).

The literature identifies three dimensions of loyalty namely attitudinal, behavioural and composite loyalty which combines both attitudinal and behavioural loyalty. The behavioural dimension consider loyalty as a consistent and repetitive purchase behaviour while the attitudinal dimension is concerned with the customer’s sense of allegiance and engagement (Bowen and Chen 2001). For research purposes the composite measure is more appropriate as it captures both attitudinal and behavioural dimensions which are the major influences of consumer decision making (Mandhachitara and Poolthong 2011).

Other studies identified service quality as a key determinant of customer loyalty either directly or via mediating effects of other constructs such as satisfaction (Park, Robertson and Cheng-Lung 2005; Ostrowski *et al.* 1993). In the same vein, other researchers have shown that corporate image significantly and positively impacts customer loyalty (Kandampully and Hu 2007; Kandampully and Suhartanto 2000).

Customer satisfaction's influence on customer loyalty

Angelova and Zekiri (2011) argue that satisfied customers are the foundation of successful businesses because it leads to repeat purchase, positive word of mouth and customer loyalty. Customer loyalty can be a result of high switching barriers or lack of close substitutes, while in some instances customers are persuaded to continue the relationship because they are satisfied with the product or service (Dehghan and Shahin 2011). In the airline industry where exit barriers are limited and alternatives exist, customer satisfaction is one of the key strategies that can be used to keep existing customers and as such any discussion on loyalty should include a comprehensive analysis of customer satisfaction (Szczepańska and Gawron 2011)

Satisfaction is regarded as a robust predictor for behavioural variables such as customer loyalty; rebuy intentions or recommendations through word-of-mouth (Eggert and Ulaga 2002). Martín-Consuegra, Molina and Esteban (2007) used satisfaction and loyalty as mediating variables in the relationship between price fairness and price acceptance and concluded that a positive relationship existed between satisfaction and loyalty. Other researchers (Bowen and Chen 2001; Tepeci 1999) however conclude that the relationship between customer satisfaction and customer loyalty is nonlinear and asymmetric, with loyalty increasing exponentially beyond a certain level of satisfaction and equally falling dramatically when satisfaction declined beyond a certain point. These findings implied that for high levels of loyalty to be assured, customers must be extremely satisfied. Other studies also noted that customers may still defect even after indicating that they are satisfied with a service provider. For example Chandrashekaran, Rotte, Tax and Grewal (2007) concluded that satisfaction strength is a key driver in translating satisfaction into loyalty and argued that satisfaction translated into loyalty when it is strongly held while weakly held satisfaction makes customers vulnerable to defection. In the same vein, Mittal and Lassar (1998) also concluded that just having satisfied customers is not good enough and suggested that a certain minimum level of satisfaction is necessary to achieve loyalty.

Services literature considers customer satisfaction to be one of the most significant outcomes of all marketing activities in any company that is market-oriented (Kandampully and Suhartanto 2000). Satisfaction is an essential ingredient for the development of loyalty and it is difficult to conceive loyalty development without satisfying customers (Oliver 1999). Based on these arguments it is reasonable to assume that the more satisfied the customers are, the higher the likelihood that they will purchase the same service repeatedly in the future.

Although there is no consensus in literature on the relationship between satisfaction and loyalty, a paper by Jan, Abdullah and Smail (2013) highlight that a number of studies carried out in the airline context provide evidence of a positive correlation between customer satisfaction and loyalty. Han, Kwortnik and Wang (2008) carried out a study across service contexts including airlines and hotels and concluded that the key determinants of loyalty are service quality, service fairness, customer satisfaction, commitment and trust. Other researchers investigated the relationship between service quality and satisfaction and the impact of these two variables on customer loyalty (Zafar, Zafar, Asif, Hunjra and Ahmad 2012; Tian-Cole, Crompton and Wilson 2002; Wong and Sohal 2003). These studies concluded that service quality leads to customer satisfaction and ultimately to loyalty. On the other hand Lemon *et al.* (2002) argue that while satisfaction is a key determinant of a customer's decision to keep or discontinue a service relationship, future utility considerations and other relational aspects that create switching costs also influence a customer's decision to continue a service relationship. In the light of the foregoing discussion, the study hypothesised that: *H1: Customer satisfaction leads to customer loyalty*

Customer loyalty programmes' influence on satisfaction

A number of studies confirmed the importance of customer loyalty programmes in influencing airline preference and customer loyalty (Hess, Adler and Polak 2007; Lederman 2007; Lewis 2004). By dissecting research data into customer segments Dolnicar *et al*. (2011) found that loyalty programmes are strongly correlated with behavioural loyalty for business and frequent travellers while the relationship was weak for casual and leisure travellers. Loyalty programme privileges are mostly attained by frequent fliers in particular business travellers hence the low interest in such programmes by casual and leisure travellers. Frequent flyer programmes also influence habit formation for airline passengers because they increase switching costs for customers (Carlsson and Lofgren 2006). However Lewis (2004) argue that if a loyalty programme is going to be effective in increasing customer loyalty, it should be structured in such a way that it influences customers to view purchases as a sequence of related decisions as opposed to separate and independent transactions. Dolnicar *et al.* (2011) however concluded that drivers of behavioural airline loyalty vary for different market segments thus highlighting the need for marketing managers to develop customised offerings for each segment.

Loyalty points generate psychological benefits to the travellers by increasing the utility of a purchase transaction because these points can be redeemed for benefits at some point in the future, accumulation of points increases the likelihood of long term relationships (Lemon *et al*. 2002, Thaler, 2008). Basso *et al.* (2009) suggest that another way of viewing FFP is that they are tools that can be exploited by airlines to take advantage of the agency relationship that exists between the employee who books the flight and the employer who pays for the ticket. The researchers argue that a FFP can act as an inducement by which airlines can influence employees to choose a particular airline over a lower priced alternative (Basso *et al.* 2009). A number of studies have focused on identifying effective methods of enhancing loyalty, including the use of customer loyalty programmes to reward repeat purchases as a way of capturing a greater share of the consumers' spending (Meyer-waarden 2008; Lewis 2004). Liu (2007) investigated the long term effectiveness of loyalty programmes by conducting a longitudinal study and concluded that these programmes positively influenced purchase frequencies and transaction sizes for both light and moderate buyers making them more loyal. On the other hand Dowling (2002) questioned the effectiveness of loyalty programmes in enhancing customer loyalty or increasing customer retention and suggested that even the most well-designed customer loyalty programmes only result in modest changes in consumer behaviour. Uncles *et al.* (2003) also argue that if a firm's competitors perceive that its loyalty programme is phenomenally successful they will quickly replicate it as the case with airline FFP, resulting in only short-lived gains. Based on the foregoing, the following hypothesis was developed: *H2: Loyalty programmes positively impact customer satisfaction*

Customer satisfaction's influence on the relationship between loyalty programmes and customer loyalty

Kaura, Prasad, and Sharma's (2015) empirical results show that customer satisfaction mediates the relationship between loyalty programmes and customer loyalty. Vessel and Zabkar (2015) collected data from retail customers to test the impact of customer satisfaction in the relationship between loyalty programmes and customer loyalty; the results confirm a mediating role of customer satisfaction. Based on the foregoing discussion, the current study proposed that
H3: Customer satisfaction mediates the relationship between loyalty programmes and customer loyalty

3. Methodology

This study adopted the quantitative approach and the survey method. Systematic random sampling method was adopted to collect data from 148 airline passengers departing from the international terminal at Harare International airport using self-administered questionnaires. A sampling interval of 5 was used to select respondents leaving the check-in counter who had booked to fly on the airlines under study and confirmed having flown at least once with the same airline in the last 12 months. The study focused on routes to international destinations that were exposed to competition to ensure passenger discretion in airline selection. The reasons for choosing Harare International Airport for this study are threefold. Firstly there has been renewed interest in the airport from a number of airlines in the aftermath of the dollarization of the economy in 2009 which brought economic stability and contributed to a steep increase in passenger numbers which grew by 27% between 2010 and 2014 (ZimStat, 2015). Secondly the central location of the airport which is within three and half hours flight time from the majority of the Southern African capitals makes it a potential hub for the region. Lastly the airport was selected for the researchers' convenience and to minimise the costs of carrying out the study.

A self-administered questionnaire was used as a data collection instrument. The questionnaire design was based on prior studies investigating airline loyalty and behavioural intentions. The measurement dimensions for customer satisfaction were adopted from Olorunniwo, Hsu and Udo (2006) and Fraering and Minor (2013). They were modified appropriately to suit the current study and consisted of two items requesting respondents to indicate the extent to which they were satisfied with airline dimensions measured on a 7-point Likert scale and the statements were on a scale from 1(Extremely dissatisfied) to 7 (Extremely satisfied). There were two items and these were: 'I am satisfied with the airline's customer loyalty programme', and 'I am happy with the rewards offered by the loyalty programme'. Measurement items for customer loyalty were adopted from Dehghan and Shahin (2011) and Caruana (2002). Three items were used and these are: 'I intent to continue flying with the airline', 'I have confidence in recommending the airline to friends and relatives', and 'I resist influences for me to switch to other airlines'. The items for the loyalty programmes scale were adopted from Gómez *et al.* (2006) and Uncles *et al.* (2003) and adapted to our specific context. The items included: 'Loyalty programmes make me strongly connected to the airline', 'I fly more frequently on this airline to earn more points', and 'If an airline does not have a customer loyalty programme I miss out on benefits'. The items for each construct are shown in Table 1.

Table 1. Measurement of constructs

Construct	Items	Source
Customer satisfaction	1. I am satisfied with the airline's customer loyalty programme 2. I am happy with the rewards offered by the loyalty programme'	Olorunniwo, Hsu and Udo (2006) and Fraering and Minor (2013).
Customer loyalty	1. I intent to continue flying with the airline 2. I have confidence in recommending the airline to friends and relatives 3. I resist influences for me to switch to other airlines	Dehghan and Shahin (2011) and Caruana (2002).
Loyalty programmes	1. Loyalty programmes make me strongly connected to the airline 2. I fly more frequently on this airline to earn more points 3. If an airline does not have a customer loyalty programme I miss out on benefits.	Gómez *et al.* (2006) and Uncles *et al.* (2003).

All items related to measuring customer loyalty programmes and customer loyalty were measured on a 7-point Likert scale from 1 (Strongly disagree) to 7 (strongly Agree). SPSS version 21 was used to process the data. Descriptive statistics and regression analyses techniques were utilised to analyse the data.

4. Results

Reliability of the instrument

The reliability of each scale was established through the use of SPSS. The reliability of the scale is the degree to which a set of items measure the same construct (Hair *et al*. (2010). A scale is considered to be reliable if the Cronbach's Alpha values are equal to or exceed the recommended threshold of 0.70 (Malhotra 2007). The loyalty programmes scale yielded a Cronbach Alpha of 0.863 while the

Customer satisfaction scale attained 0.710 and the scale for Customer loyalty was 0.700 which shows that all the Alpha coefficient values are at the acceptable and reliable level.

Sample characteristics

The gender distribution was uneven with more males representing 58.8% (n=87) of the respondents compared to women at 41.2% (n=61). The majority of the respondents were aged between 18 and 60 years (94.6%; n=140), while the rest were over the age of 60. The ethnic composition was skewed towards Africans and Europeans representing 90.5% (n=134) of the valid cases. Almost half the respondents (49.3%, n=73) indicated that they had completed post graduate studies and the income levels for all the cases were evenly distributed.

Hypotheses testing

The first hypothesis that Loyalty programme leads to customer satisfaction was analysed by regressing customer satisfaction onto loyalty programmes. Model 1 in Table 2 shows that loyalty programme is a significant predictor to customer satisfaction ($\beta= 0.1349$; $p< 0.05$). These results support *H1.*

Table 2. Regression analysis

Model 1: Customer satisfaction = f (Loyalty programmes)			
	Beta	t-value	Sig
Loyalty programmes	0.1379	2.5694	0.000*
Model 2: Customer loyalty = f (Customer satisfaction)			
	Beta	t-value	Sig
Customer satisfaction	0.7996	10.9425	0.001*
Model 3: Customer loyalty = f (Loyalty programmes)			
	Beta	t-value	Sig
Loyalty programmes	0.3275	4.6506	0.000*
Model 4: Customer loyalty = f (Loyalty programmes, Customer satisfaction)			
	Beta	t-value	Sig
Loyalty programmes	0.2197	4.6561	0.000*
Customer satisfaction	0.1079	3.873	0.000*

H2 sought to evaluate the influence of customer satisfaction on customer loyalty. To test this hypothesis, customer loyalty was regressed against customer satisfaction. Model 2 in Table 1 depicts that customer satisfaction has a significant impact on customer loyalty ($\beta= 0.7996$; $p< 0.05$), which lends support to *H2.*

The third hypothesis stated that customer satisfaction mediates the relationship between loyalty programme and customer loyalty. The relationship was examined following a suggestion by Baron and Kenny (1986) who opined that a variable acts as a mediator if it meets four conditions. The first one is that the independent variable (loyalty programme) significantly influences the mediator variable (customer satisfaction). The second condition is that the mediator variable significantly impacts the dependent variable (customer loyalty). Thirdly, the

independent significantly affects the dependent variable, and finally, when both the independent and the mediator variables are considered together, the impact of the independent variable on the dependent variable is reduced. Partial mediation is present when the independent variable is significant and when its influence is reduced if the mediator is controlled, and there is full mediation when the independent variable has no effect when the mediator is controlled.
As indicated in Model 1 in Table 2, loyalty programme (the independent variable) significantly influences customer satisfaction (the mediator) (β= 0.1349; p< 0.05), which meets the first condition for the existence of a mediating effect. Model 2 shows that customer satisfaction significantly impacts the dependent variable, customer loyalty (β= 0.7996; p< 0.05), which satisfies the second condition. Model 3 indicates that loyalty programme significantly affects customer loyalty (β= 0.3275; p< 0.05), which achieves the third condition. Model 4 indicates that when both loyalty programme and customer satisfaction are considered in the same model, the predictive power of loyalty programme on customer loyalty reduced to (β= 0. 2197;p< 0.05), compared to its explanatory power in Model 3 (β= 0.3275; p< 0.05). This supports the fourth condition for the existence of a mediating effect. The results demonstrate a partial mediation effect of customer satisfaction since the impact of loyalty programme on customer loyalty was reduced when the mediator, customer satisfaction was controlled for, as depicted in Model 4. Therefore *H3* is supported.

5. Discussion of the results

The study makes a contribution to the existing body of knowledge of customer loyalty literature by establishing and testing the mediating effect of customer satisfaction in the loyalty programmes and passenger loyalty relationship in Southern Africa. There are number of studies that have investigated the direct effect of loyalty programmes on customer loyalty and also the how customer satisfaction impacts customer loyalty. However, there is dearth of research on the mediating effect of customer satisfaction on the relationship between loyalty programmes and passenger loyalty especially in a developing country context like Zimbabwe. The results of the study are particularly important to airlines operating in Zimbabwe where the business environment is characterized by markets with big families with very low income levels due to the economic hardships in the country. Unlike other emerging countries like South Africa and Botswana, Zimbabwe as an investment destination for airlines has depressed markets due to very difficult economic conditions and this makes loyalty programmes a critical marketing tool. Mishra and Prasad (2014) have found that the lower the income levels of consumers, the higher the loyalty to loyalty programmes. The same study also revealed that the bigger the family size, the more loyal are households to loyalty programmes. Dorotic, Bijmolt, and Verhoef’s (2012) study found that the effects of loyalty programmes across customer segments and markets are different. Therefore, the results of this study are of special importance to airlines operating in the Zimbabwean context since the depressed and uncertain nature of Zimbabwe’s environment requires frequent use of loyalty programmes to help airlines enforce passenger loyalty.

The results of the study indicate that loyalty programmes activities by airline operators which aim to ensure passenger loyalty have to trigger customer satisfaction first. This demonstrates that loyalty programmes can have strong effect on customer loyalty via customer satisfaction. This shows that airline operators aiming to improve customer loyalty should invest loyalty programmes so that passengers are satisfied and eventually loyal.

The findings of this empirical study are expected to have to provide fruitful implications to both practitioners and academicians. On the academic side, this study makes a significant contribution to the customer loyalty literature by investigating the mediating effect of customer satisfaction on the relationship between loyalty programmes and passenger in a developing country as Zimbabwe. By and large, the findings of the current study provide tentative support to the proposition that loyalty programmes and customer satisfaction should be recognized as significant antecedents for customer loyalty in the context of a developing country such as Zimbabwe. Further, customer satisfaction should be recognized as a mediating variable between loyalty programmes and customer satisfaction.

On the practitioners' side, the significant influence of loyalty programmes on passenger loyalty and the mediating role of customer satisfaction in Southern Africa are highlighted. This study therefore submits that airline operators can benefit from the implications of these findings. For instance, given the robust relationship loyalty programmes and customer loyalty and also the mediating effect of customer satisfaction, airline operators need to pay attention to loyalty programmes and customer satisfaction in order to enhance passenger loyalty. By investing more on loyalty programmes, airline operators are able to satisfy the expectations and needs of passengers so as to create and sustain passenger loyalty.

The study focused only on Harare International Airport due to different conditions and cultures, the results might not be applicable to other Southern African countries. The study can be strengthened by including other international airports. Subsequent research studies perhaps could broaden the scope of the population by including other countries in Southern Africa. The study also could be improved by carrying out a comparative study between Southern Africa and other regions on the continent like the West, Eastern and Northern parts of Africa. By and large, the findings of this study and the suggested future avenues of study can contribute in generating new knowledge to the existing body of customer loyalty in Southern Africa, a context that is has generally been neglected by researchers.

REFERENCES

Allaway, A.W., Berkowitz, D., D'Souza, G. (2003) Spatial diffusion of a new loyalty program through a retail market*. Journal of Retailing, 79, pp. 137–151.*

Angelova, B., Zekiri, J. (2011) Measuring Customer Satisfaction with Service Quality Using American Customer Satisfaction Model (ACSI Model). *International Journal of Academic Research in Business and Social Sciences*, 1(3), pp.232–258.

Basso, L.J., Clements, M.T., Ross, T.W. (2009) Moral Hazard and Customer Loyalty Programs. *American Economic Journal: Microeconomics*, 1(1), pp.101–123.

Bowen, J.T., Chen, S.-L. (2001) The relationship between customer loyalty and customer satisfaction. *International Journal of Contemporary Hospitality Management*, 13(5), pp.213–217.

British Airways, 2015. Gold benefits - Travel as you’ve always imagined it. Available at: http://www.britishairways.com/en-gb/executive-club/tiers-and-benefits/gold-benefits [Accessed May 27, 2015].

Carlsson, F., Lofgren, A. (2006) Airline choice, switching costs and frequent flyer programmes. *Applied Economics*, pp.1469–1475.

Caruana, A. (2002) Service loyalty: The effects of service quality and the mediating role of customer satisfaction. *European Journal of Marketing*, 36(7/8), pp.811–828. Available at: http://www.emeraldinsight.com/10.1108/03090560210430818 [Accessed July 11, 2014].

Chandrashekaran, M. et al. (2007). Satisfaction Strength and Customer Loyalty. *Journal of Marketing Research*, 44(1), pp.153–163.

Davis, M.M., Heineke, J. (1998) How disconfirmation, perception and actual waiting times impact customer satisfaction. *International Journal of Service Industry Management*, 9(1), p.64 73.

Dehghan, A., Shahin, A. (2011) Customer Loyalty Assessment: A Case Study in MADDIRAN, the Distributor of LG Electronics in Iran. *Journal of Business Management and Strategy*, 2(1), pp.1–23.

Divett, M., Crittenden, N., Henderson, R. (2003) Actively influencing consumer loyalty. *Journal of Consumer Marketing*, 20(2), pp.109–126.

Dolnicar, S. et al. (2011) Key drivers of airline loyalty. *Tourism Management*, 32(5), pp.1020–1026.

Dorotic, M., Bijmolt, T. H., Verhoef, P. C. (2012) Loyalty Programmes: Current Knowledge and Research Directions*. *International Journal of Management Reviews*, *14*(3), 217-237.

Eggert, A. & Ulaga, W. (2002) Customer perceived value: a substitute for satisfaction in business markets. *Journal of Business & Industrial Marketing*, 2-3(17), pp.107–118.

Fraering, M., Minor, M.S.(2013) Beyond loyalty : customer satisfaction, loyalty, and fortitude. *Journal of Services Marketing*, 27(4), pp.334 – 344.

Gómez, G.B., Arranz, G.A., Cillán, G.J. (2006). The role of loyalty programs in behavioral and affective loyalty R. C. Levanthal, ed. *Journal of Consumer Marketing*, 23(7), pp.387–396. Available at: http://www.emeraldinsight.com/doi/abs/10.1108/07363760610712920 [Accessed December 8, 2014].

Hair, J.F. et al. (2010) *Multivariate Data Analysis: A Global Perspective.*, New Jersey: Prentice Hall.

Hair, J.F., Bush, R.P. & Ortinau, D.J., 2000. *Marketing research: a practical approach for the new millennium*, Singapore: McGraw Hill.

Han, X., Kwortnik, R.J., Wang, C. (2008) Service loyalty: An integrative model and examination across service contexts. *Journal of Service Research*, 11, pp.22–42.

Hess, S., Adler, T., Polak, J.W. (2007) Modelling airport and airline choice behaviour with the use of stated preference survey data. *Transportation Research Part E*, 44(0), pp.221–233.
Jan, M.T., Abdullah, K., Smail, M.H. (2013). Antecedents of Loyalty in the Airline Industry of Malaysia : An Examination of Higher-Order Measurement Model. *Proceedings of 3rd Asia-Pacific Business Research Conference 25 - 26 February 2013, Kuala Lumpur, Malaysia*, pp.1–14.
Kandampully, J., Hu, H. (2007) Do hoteliers need to manage image to retain loyal customers? *International Journal of Contemporary Hospitality Management*, 19(6), pp.435–443. Available at: http://www.emeraldinsight.com/doi/abs/10.1108/09596110710775101 [Accessed January 23, 2015].
Kandampully, J., Suhartanto, D. (2000) Customer Loyalty in the hotel industry: the role of customer satisfaction and image. *International Journal of Contemporary Hospitality Management*, 12(6), pp.346–351.
Kaura, V., Durga Prasad, C. S., Sharma, S. (2015) Service quality, service convenience, price and fairness, customer loyalty, and the mediating role of customer satisfaction. *International Journal of Bank Marketing*, *33*(4), pp. 404 - 422
Kotler, P., Keller, K.L. (2012) *Marketing Management* 14th ed., Pearson Education, Inc., publishing as Prentice Hall, One Lake Street, Upper Saddle River,New Jersey 07458.
Lacey, R., Sneath, J. (2006) Customer loyalty programs: are they fair to consumers? *Journal of Consumer Marketing*, 7(23), pp.458–464.
Lemon, K.N., White, T.B., Winer, R.S. (2002) Dynamic Customer Relationship Management: Incorporating Future Considerations into the Service Retention Decision. *Journal of Marketing*, 66, pp.1–14.
Lewis, M. (2004) The Influence of Loyalty Programs and Short-Term Promotions on Customer Retention. *Journal of Marketing Research*, 41(3), pp.281–292.
Lovelock, C., Wirtz, J. (2010) *Services Marketing - People, Technology, Strategy* 7th ed., Prentice Hall.
Malhotra, N.K. (2007) *Marketing Research: An applied orientation.* 7th ed., Engle Wood Cliffs, NJ.: Prentice Hall.
Martín-Consuegra, D., Molina, A., Esteban, Á. (2007) An integrated model of price, satisfaction and loyalty: an empirical analysis in the service sector. *Journal of Product & Brand Management*, 16(7), pp.459–468. Available at: http://www.emeraldinsight.com/doi/abs/10.1108/10610420710834913 [Accessed December 30, 2014].
Meyer-Waarden, L. (2013) The impact of reward personalisation on frequent flyer programmes' perceived value and loyalty. *Journal of Services Marketing*, *27*(3), 183-194.
Mishra, S., Prasad, S. (2014) Exploring linkages between socio-demographic factors and customer loyalty in India. *Management & Marketing*, *9*(1), 13-26.
Mittal, B., Lassar, W.M. (1998). Why do customers switch? The dynamics of satisfaction versus loyalty. *Journal of Services Marketing*, 12(3), pp.177–194.
Oliver, R.L. (1997) *Satisfaction: A behavioural perspective on the consumer*, New York NY: Irwin-McGraw Hill.

Olorunniwo, F., Hsu, M.K., Udo, G.J. (2006) Service quality, customer satisfaction, and behavioral intentions in the service factory. *Journal of Services Marketing*, 20(1), pp.59–72.
Ostrowski, P.L., O'Brien, T., Gordon, G.L. (1993). Service quality and customer loyalty in the commercial airline industry. *Journal of Travel Research*, 32(1), pp.16–24.
Palmer, A., McMahon-Beattie, U., Beggs, R. (2000) A structural analysis of hotel sector loyalty programmes. *International Journal of Contemporary Hospitality Management*, 1(1), pp.54–60.
Park, J., Robertson, R., Cheng-Lung, W. (2005) Investigating the Effects of Airline Service Quality on Airline Image and Passengers ' Future Behavioural Intentions : Findings from Australian international air passengers. *THE JOURNAL OF TOURISM STUDIES*, 16(1), pp.2–11.
Peppers, D., Rogers, M. (2005) Customers Don't Grow on Trees. *Fast Company*, pp.25–26.
Schieffer, R., 2005. *Ten Key Customer Insights: Unlocking the mind of the market*, South-Western Educational Pub.
Szczepańska, K., Gawron, P.P. (2011) Changes in Approach to Customer Loyalty. *Contemporary Economics*, 5(1), p.10. Available at: http://ce.vizja.pl/en/download-pdf/id/202 [Accessed January 7, 2015].
Tian-Cole, S., Crompton, J., Wilson, V. (2002) An empirical investigation of the relationships betweenservice quality, satisfaction and behavioral intentions among visitors to a wildlife refuge. *Journal of Leisure Research*, 1(34), pp.1–24.
Tepeci, M. (1999) Increasing brand loyalty in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 11(5), pp.223–230.
Uncles, M.D., Dowling, G.R., Hammond, K. (2003) Customer loyalty and customer loyalty programs. *Journal of Consumer Marketing*, 20(4), pp.294–316.
Vessel. P., Zabkar, V. (2009) Managing customer loyalty through the mediating role of satisfaction in the DIY retail loyalty program*, Journal of Retailing and Consumer Services, 16(5) pp 396-406.*
Wong, A., Sohal, A. (2003) A critical incident approach to the examination of customer relationship management in a retail chain: an exploratory study. *Qualitative Market Research: An International Journal*, 6(4), pp.248–262. Available at: http://www.emeraldinsight.com/doi/abs/10.1108/13522750310495337 [Accessed February 11, 2015].
Zafar, M. et al. (2012) Service quality, customer satisfaction and loyalty: an empirical analysis of banking sector in Pakistan. *Information Management and Business Review*, 4(3), pp.159–167.

STUDIA UNIVERSITATIS BABEȘ-BOLYAI OECONOMICA, VOLUME 60, ISSUE 3, 2015

REFLECTIONS ON PUBLIC SECTOR CONSOLIDATED FINANCIAL STATEMENTS RESEARCH

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Abstract. The article aims to analyze the specific issue of consolidated financial statements in the public sector, in order to have an overview of the current knowledge of this topic at international level. To achieve this objective we explored the literature on the consolidated financial statements in the public sector through qualitative analysis. The main findings relate to the identification of the research directions analyzed by scholars in the public sector consolidated financial statements. Following the qualitative research, we noticed that research on this issue is only at the beginning. There are some research areas that have been insufficiently analyzed and where there is a need to continue and deepen the research. We found that this new type of reports could bring a lot of advantages for the public sector. They could also increase the transparency and accountability of governments.

JEL classification: M41, H83

Keywords: public sector consolidated financial statements, literature review, IPSAS, local governments

1. Introduction

The technological and social progress in the twentieth century have increased the organizational complexity, creating a new trend in the business world. The economic and organizational structures were required to adapt to this trend. However, things have evolved in the public sector, so that in the recent years, most OECD countries have introduced some important reforms in the public sector accounting system, aimed at improving public service management, and increasing transparency and accountability of governments (either central or local). The public sector accounting reforms share a common direction in the implementation of systems based on accrual accounting. Thus, the transition from cash based accounting to the accrual one was the first step that led to the introduction of the public sector consolidated financial statements.

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The most important thing from which every academic research should start is knowing in detail the field in question. The analysis of the literature imposes searching the most relevant papers and articles. In addition, the aim of such a study is to discover some possible ways of research. The results obtained from such an analysis would bring relevant contributions to the scientific knowledge. Besides these new ways of research that might be found, we consider that this type of research may also provide new horizons related to enlarging and enriching the practices that exist in the studied field.

The public sector consolidated financial statements might be considered a topic of current interest which is gradually developing. This issue of consolidated financial statements in the public sector has been of major interest lately even for researchers from different academic areas. As the topic of consolidated financial statements in the public sector is going to be implemented in different countries and it is under the process of developing in other countries, from the information we have now there is no study that might have analyzed the specialized literature in the field of consolidated financial statements in the public sector. Although there have been studies of literature in another area, such as public sector accounting (Goddard, 2010), accounting for public services (Broadbent & Guthrie, 1992, 2008), this subject wasn't studied through an analysis of the literature.

Therefore, we aim to develop a substantial study of the literature in the field of accounting, focused on the public sector consolidated financial statements. Our objective is to identify the main topics approached by researchers who show a great interest in the issue of public sector consolidated financial statements, but also to emphasize the advantages and disadvantages that these reports can bring.

This analysis comes to help any researcher or practitioner who wants to get an overall idea about the issue of consolidated financial statements in the public sector.

2. Research methodology

In order to achieve the established objectives, we conducted our research by following four steps.

Since it is impossible to do a review of the whole literature related to a certain field, in the first stage we selected the journals to include in the study. The journals included are journals which have as main research direction the public sector research. So, we selected 19 international journals (see Table 1), of which 10 are ISI indexed journals.

After choosing the journals, we selected the articles published during 2000 and 2011 in these journals. The search was done by the keywords "public sector consolidated financial statements", being limited to the occurrence of these words in the title, abstract or keywords of the article. However, the number of identified articles was very small and so we expanded the search in conferences and we identified another 11 articles written on this topic. In order to identify more articles, we expanded our research in two databases but we could not find more articles on this topic. We can explain the small number of articles by the novelty of these reports in the public sector. These reports represent a new reform that took place in the public sector and are under development and implementation in the public sector.

Table 1. The selected journals and the number of identified articles

No.	The name of selected journal	Number of identified articles
1	Financial Accountability & Management (FAM)	0
2	Accounting, Auditing and Accountability Journal (AAAJ)	0
3	Accounting, Organizations and Society (AOS)[ISI]	0
4	Management Accounting Research (MAR)[ISI]	0
5	European Accounting Review (EAR)[ISI]	0
6	Critical Perspective on Accounting (CPA)	0
7	British Accounting Review (BAR)	0
8	Abacus – A Journal of Accounting Finance and Business Studies (ABA)[ISI]	3
9	Accounting and Finance (AF)[ISI]	0
10	Journal of Business Finance & Accounting (JBFA)[ISI]	0
11	Journal of International Financial Management & Accounting (JIFMA)	0
12	Journal of Accounting Research (JAR)[ISI]	0
13	Australian Accounting Review (AAR)[ISI]	0
14	Public Budgeting & Finance (PBF)	0
15	Australian Journal of Public Administration	1
16	Public Money & Management	7
17	Accounting and Business Research (ABR)[ISI]	1
18	Journal of Accounting and Public Policy (JAPP)[ISI]	0
19	International Review of Business Research Papers	1
20	International Conferences	11
	TOTAL	24

Source: author's projection

The third stage was achieved through a detailed analysis of the identified articles as being relevant to our topic of research. The main purpose of this detailed analysis was, in fact, the identification of the key research directions.

The last stage of this study is the qualitative analysis of articles, a step that requires a high capacity for synthesis and through which we tried to emphasize the main contributions of various researchers to knowledge of the proposed research area. Thus, we analyzed the issues presented by the researchers and the results and conclusions obtained under each theme analyzed.

3. The main directions of research regarding the public sector consolidated financial statements

We considered that one of the most important characteristics analyzed in the articles is represented by the main topic discussed. We only established the topics analyzed by each article and we summed up the number of articles for each topic, trying to emphasize the importance given by researchers to each topic. The main research topics, directions are the following:

1. The characteristics of consolidated financial statements in the public sector: basic notions, needs, implementation, tendencies;
2. IPSAS – standards for the public sector regarding the consolidated financial statements; and
3. The consolidation of the local governments.

So, we identified 10 articles for the first topic, 3 articles for the second one and 11 articles for the third one.

It can be noticed that the researchers showed an increasing interest in the analysis of implementing consolidation at local level, being followed by the characteristics of consolidated financial statements in the public sector at general level. This is not surprising as many countries showed their interest in local consolidation and even experienced this in order to make an idea about how useful these consolidated reports might be. After implementing them at a local level, they started to introduce them at a central level, being aware of the advantages brought by these reports in the public sector. We cannot say that there is also an increasing interest in the issue of IPSAS. This could be explained by the fact that some countries failed to adopt the standards for the public sector, and at the same time by the multitude of laws and standards applied in the public sector at country level. This thing will soon change as a result of trying to harmonize and adopt a single set of standards in the public sector as well.

4. Qualitative analysis

We tried to analyze qualitatively the main research directions or topics regarding the consolidated financial statements in the public sector. Thus, by analyzing the entire literature we had access to, we tried to identify the main aspects analyzed, but at the same time to emphasize the results obtained and the conclusions drawn by researchers regarding this topic. We analyzed the contributions brought by researchers to the scientific knowledge of this area. Taking into account the fact that we did not identify any study that might analyze the main contributions brought by researchers to this area, we hope that through this study we might fill a gap that exists in the literature, but also to influence researchers to give more importance to this subject that is still at the beginning.

4.1. The characteristics of public sector consolidated financial statements: needs, implementation, trends

The topic of public sector consolidated financial statements is a subject of current interest that many countries face. Even though they are not widespread, they gradually try to influence the accounting and reporting system of the public sector. Lately, a series of changes related to the accounting system occurred in the public sector, changes that opened the horizons of consolidated financial statements. Taking into account these aspects, one question of interest is whether the consolidated financial statements are a benefit for the public sector and whether they can be implemented in this sector, having in mind the specific characteristics of the public sector.

In order to find the answers to these questions, researchers made different studies, trying to underline the experiences of countries that started preparing these consolidated financial statements in the public sector.

The study made by Grossi&Pepe (2008) is a complex study that tries to underline first what caused the introduction of these consolidated reports in the public sector, too, but also the characteristics of consolidation. They set the basis of a good analysis regarding the international tendencies of consolidating the annual accounts in the public sector. They considered the comparative analysis as being the most appropriate method to emphasize the similarities and differences between accounting principles and standards used for the preparation of consolidated financial statements in the public sector. The comparison is based on 7 representative countries. These countries are considered to be the most receptive to the introduction and preparation of consolidated financial statements in the public sector, countries that were the first that made the attempt and were convinced of the benefits of preparing and presenting new forms of financial reporting in the public sector. Grossi, an important researcher on this issue, has made many studies through which he tried to provide other researchers and practitioners answers on this subject, but he also tried to find his answers on the topic. The authors consider that there are quite substantial differences between the characteristics of private and public sector, which is the reason that hinders the imitation of the private sector approaches to the public one. One of the differences is the ability of public entities to adapt continuously and always meet the notion of accountability, which causes a strong connection between the reporting entity and the notion of accountability. They also classified the practice of these countries, identifying two categories:

1. the public sector approach, where standards fully comply with public sector characteristics and there is a strong desire to protect the role and functions of public entities but also of the community interests (Sweden and France); and
2. the private sector approach (or neutral approach) where even though the specific features of the public sector are identified, they are based on a private managerial culture (Australia, New Zealand).

So, they considered it appropriate to introduce a third category, namely, the public-private sector approach (IPSASB, United Kingdom, U.S., Canada), where the standards have been established as an adaptation from private to public sector (IPSASB, GASB, PSAB, FASAB) because they also refer to private regulations (United Kingdom).

Furthermore, in 2009, Grossi conducted another study, similar to the above mentioned one. He analyzed the topic of public sector consolidated financial statements, this time in 6 countries (Sweden, United Kingdom, USA, Canada, New Zealand and Australia). He presented the differences and similarities regarding the topic, but also the international tendencies related to the development of this topic, emphasising the role of IPSASB. As in the previous study, he presented the characteristics of approaching consolidation of the public sector related to: the organizations that issue standards, the context for which the standards were issued (private or public), the criteria for identifying the scope of consolidation; this thing might be achieved by using the method of comparison of standards issued in these countries. As a result of this study, it was found that there are no substantial differences between the standards nor between the indicators of the criteria for consolidation, but the practice is moving towards two tendencies: a) Anglo-Saxon countries converge standards from the private sector to the public one; b) in some countries there is an influence of the government and thus the standards are modified in order to be applied in public sector.

Moreover, it was concluded that in countries like Australia, New Zealand and the USA there is a cooperative relationship between the regulatory bodies and the government and that in the UK there is little cooperation.

Another important researcher of public sector consolidated financial reports is R.G. Walker. Like Grossi, he also showed great interest in this subject, believing in the benefits of implementing the consolidated financial statements in the public sector. In the study that he made (2009), through a theoretical research, which involves an analysis of the specialized literature, of the existing regulations and practices, he noticed that governments have experienced or even prepared consolidated financial statements for the entire government on an accrual basis for more than three decades. The study aimed at analyzing the practices of consolidated financial statements in the public sector (especially in Australia), considering in this context, the general case of presenting consolidated financial statements of the entire government, public administration (or other sets of governments or government agencies). However, the focus was on identifying the objectives of this form of reporting and therefore, setting the limits of the reporting entity (or the scope of consolidation) for the public sector consolidated statements and the scope of consolidation of the public sector sub-sectors. The author's analysis continues with establishing the potential users of aggregated financial data about the position and the financial performance of governments, but also the decisions to be taken on such information. He also took into account whether such decisions should be considered a routine or if they occur only in certain circumstances or exceptional circumstances. He concluded that a number of routine decisions have at their basis some financial information presented as consolidated financial statements. Still, they should not be the ones for the entire public sector. At the same time, he supports the idea that only by identifying the use and users we can determine the amount of data presented by these reports and that practices in Australia on the public sector consolidation are of great diversity (especially in terms of how assets and liabilities are identified and measured).

He continued the research on consolidated financial statements and thus, he tried in his study (Grossi, 2011) to identify the problems that occurred in the practice in Australia since 1988. He suggested how these issues could be solved by referring to the decisions that might be taken in routine circumstances by the users of these reports. This time again, he used a chronological historical research, conducted by a literature review and a review of various documents essential to finding the desired answers. As a result of the analysis, he stressed that the issue of the public sector consolidated statements does not involve some technical problems that arise in the private sector. This is supported by the fact that the government doesn't make purchases. This means that there are no differences between the purchase prices and net assets acquired, which does not apply to the private sector where procurement determines recognition of intangible assets, goodwill and depreciation. He also noticed that there are a number of consolidation issues that remain unresolved by the accounting standards. While international and Australian standards refer to situations covering the entire government and GGS, they still need to apply and strengthen non-financial public sector entities. Also, the absence of certain requirements for disclosure of transactions between-sectors can substantially affect the operating results reported. He also states that identifying the scope of consolidation is very important. At the same time, public sector consolidated financial statements provide a summary of financial performance of government as a whole. Another important aspect is the opportunity of performance indicators to accompany the consolidated report, which might determine that the provision of performance indicators together with the consolidated reports would give stakeholders a more complete and informative image of government performance in providing services.

One of the concepts that have a direct relationship with the issue of consolidated financial statements in the public sector is "accountability". Many researchers believe that accountability is an essential feature in the public sector, without which consolidated financial statements cannot be drawn. Thus, in his study, Wise (2010) tried, through a theoretical research, by including a new variable (preparer-commanders' beliefs about the usefulness of whole-of-government consolidated financial reporting), to find an answer to the question of whether the consolidated financial information is useful for government resource allocation decisions, not only for the decision-making purposes by using the Commander Theory.

In order to answer these questions, besides the literature review, he conducted a survey, an investigation by sending by e-mail a questionnaire that might explore the views of the authors of the public sector policy and of those who prepared a utility report on consolidated financial statements of all government, and then, using descriptive statistics, he analyzed the answers received. The sample selected was a relatively small one (Head of Finance and the Treasury Bureau and general auditor of each Commonwealth, states and territories), but then its size was expanded in an effort to capture the views of the officers in the role of deputies or senior officers. So, finally there were 52 dominant and subordinate preparer-commanders and their deputies and senior advisers. Of these 52 questionnaires, only 17 responses were received, so we can say that it was a fairly small number. According to the analysis of the questionnaires received, we found that there is a general conviction that the whole of government consolidated financial reports are useful and that the consolidated financial information is comparable. However, respondents are not convinced that the benefits of preparing consolidated financial reports are higher than costs. Nevertheless, the results show a very strong belief that, in terms of cost-effectiveness decisions, unconsolidated information is far less beneficial than consolidated information and state that some of the benefits of consolidated financial reporting have been experienced by stakeholders. The two terms ”ownership” and ”control” still determine pros and cons, and the respondents do not seem convinced that ownership was the most appropriate criterion for implementation of consolidation accounting in the public sector, and believe that the concept of control is necessary for whole of government consolidated financial reporting. This article concludes as most research does, namely that there are differences between private and public sectors, and certain things can not be taken from the private sector. For example, it is necessary to identify other users of consolidated reports, but also their information requirements as they differ from those of the private sector. At the same time, it is also necessary to develop a conceptual framework that might adequately reflect the government nature and operations.

Having in mind all those who have shown a keen interest in this issue, we can say that the theoretical research prevails in highlighting the main features of the public sector consolidated financial statements, but there is still some more empirical research.

4.2. IPSAS – Standards for the public sector regarding the consolidated financial statements

IPSAS are based on standards issued for the private sector (IAS / IFRS). Although there are some arguments that highlight the differences between the two sectors, private and public, many private practices have been implemented in the public sector. Even though Australia has used the same standards regarding the issue of consolidation, for both the private and public sector, considering that there are no substantial differences, there are countries for which the differences between the two sectors should be considered when developing standards and when applying them to the issue of consolidation, respectively. Some researchers have expressed interest in building analysis on standards in the public sector.

A study that we had in view was the one conducted by Johan Christiaens, Jan Rommel and Philippe Van Cauwenberge (2008), who considered analyzed IPSAS 22. They have produced a documentary study, based on a critical examination of legislation, standards and interpretations. They have also taken into account other previous research in this area. They tried to find an answer to the following questions: What will be the consequences of applying IPSAS as a conceptual framework for WGA? What type of accounting information will result from the application of IPSAS concept? However, the previous research has highlighted the growing differences with regard to regulations and accounting practices that currently coexist in the accounting systems in the public sector (Christiaens, 2001, Pina and Torres, 1996). Governmental accounting seems to be basically an uncoordinated and extremely complicated "chimera", creating the need of consolidated accounts (Jones, 1995). The authors believe that IPSAS have played a positive role in developing uniquely allowed accounting rules that are known worldwide. The objectives of WGA refer to organizational management, ownership and development of macro-economic policy (Chow et al., 2007:34). The IPSAS conceptual framework addresses these objectives by focusing on the need for: 1) transparency, 2) a better understanding of the market and non-commercial activities, 3) understanding the relationship between financial statements vs. financial reporting based on statistics. So, certainly, the concept of IPSAS on the WGA is worthy of opening the way towards issuing transparent whole of government financial statements. At the same time, the conceptual analysis of IPSAS on WGA suggests a number of conceptual issues, such as: a) IPSAS are largely inspired by private sector standards thus they favour the hypothesis that governmental reporting should be conducted by accounting methods and commercial/private viewpoints b) there is also a confrontation with financial reporting systems on a statistical basis, which currently serve the needs of other users. The IPSAS govern these two systems only for decision makers; c) IPSAS underestimate the political and organizational characteristics of governments. This study attempted an analysis of conceptual framework only from the conceptual point of view, the authors hoping to achieve in the future an empirical study on the application of WGA reports and their usefulness to users.

4.3. Consolidation of local governments

Local governments have played an important role in implementing the consolidated financial statements. Many countries were receptive to this issue of current interest and had shown interest in discovering the benefits and usefulness of consolidated reports. If practitioners have also considered the introduction of consolidated financial statements in the local public sector as an immense horizon, openness to new, these consolidated reports were a subject that has aroused the interest of researchers as well.

Taking into account the interest shown by both practitioners and researchers, we also felt that we must pay significant attention to this issue, or rather to this research direction. Thus, we were able to have access to some studies that had as main subject the consolidated financial statements of local governments, studies that have provided the understanding, to a greater extent, of this topic.

As mentioned above, Giuseppe Grossi is a researcher concerned with the public sector consolidated financial statements. Grossi also paid considerable attention to the analysis of consolidated financial statements at local level. In the studies conducted in 2008 and 2009, Grossi analyzed the impact, the possible effect on the consolidated financial reporting accounting and reporting system of Italian local government (provinces and municipalities). The study was based on a pilot project on consolidated financial reporting in Tuscany, a project done in collaboration with the Association of Italian Municipalities. The survey was conducted on a selected sample of the financial managers of 12 municipalities in Tuscany. Through this study, answers to a series of questions were found and some issues were clarified. It was observed that there is a tendency for the implementation and preparation of consolidated reports in certain municipalities, the most responsive one being Pisa, which has already prepared consolidated reports. Also, Florence, Siena, and Prato developed a plan for preparing the consolidated statements and will do so. In terms of consolidated reports users there were identified both the internal users (the main ones being politicians, followed by managers of the city and the sector) and the external ones (the key is people, followed by other public administrations (ministries), donors, the court audit and other stakeholders). In some municipalities, the existence of a unit responsible for internal control of municipal corporations was also identified. The opinions regarding the actors involved in the consolidation process are divided. Some believe that the CFO is responsible for preparing the consolidated statements; others indicate control unit managers and top managers as the most appropriate bodies to do so. Practitioners also identified the most common issues, obstacles to consolidated financial statements implementation at the local level:

1. lack of homogeneity of the accounting of local administrations and municipal companies;
2. lack of expertise and know-how (insufficient knowledge of the consolidated reports);
3. lack of staff;
4. no obligation to completion;
5. difficulties in obtaining necessary data and documents over time;
6. limited transparency of annual reports of the local government; and
7. lack of appropriate software.

Indeed these obstacles must be overcome and taken into account for accurate and efficient implementation, not only locally but also centrally. All the results of the study offered the authors the opportunity to understand the reasons why consolidated financial statements are not spread to the local government in Italy, and also to understand that the adoption of consolidated financial reporting (CFR) requires overcoming cultural, technical and legal nature obstacles. In conclusion, we can say that the issue of consolidation is a complex issue which requires financial and human investment, and it is required by the local governments in Italy to invest more in training in order to develop innovative accounting instruments (accrual accounting and consolidated financial statements).

In another study, Grossi examined, throughout a critical analysis, the aspects of IPSAS implementation related to consolidation of the local governments from Italy. Grossi tried to determine whether consolidated financial statements (CFS) are a tool for increasing communication and ensuring that the public interest is followed up or is just another way through which government accounting practices are colonized by the private sector.

Starting from the idea that IPSAS 6 was issued in accordance with IAS 27, he notices that the peculiarities of governmental organizations seem not to be taken into account and that the consolidation requirements according to IPSAS 6 are based on private practices. Similar to Wise, Grossi noticed that IPSAS framework has the positive effect of providing transparent consolidated information, which is useful for decision making, but he also found the existence of conceptual and practical problems, namely the consolidation area is very difficult to establish, because the IPSAS approach regarding consolidation is inspired by the private sector accounting standards and the relations between government entities are based on social, political and administrative criteria, not only on economic and legal power. Since CFS are prepared by public sector organizations, it may be believed that they should gain a dominant "public interest" and therefore it is considered that the existing accounting standards and techniques for consolidation should be revised.

Another representative study for the consolidated financial statements of the local governments was the one conducted by Andreas Bergmann and Daniel Bietenhader (2008). The objective was to explore the current state in Switzerland (the differences in the practices and the views on consolidation). In this respect, they surveyed a sample of seven cities (Zurich, Basel, Bern, Winterthur, St. Gallen, Lucerne, Biel) in the German-speaking part of Switzerland. Thus, those who completed the questionnaires were CFOs of the seven cities being considered the most suitable to answer these questions and to give a true picture of the current state of consolidated financial statements. It was found that the largest Swiss municipalities control separate entities of significant size and relevance, namely public agencies and public corporations. Even though they do so, with one exception (Bern), their financial activity is not consolidated, and in some cases it is not even presented. There are also CFOs who consider the consolidated report very important (Zurich, Bern, Basel and Winterthur), but there are also disagreements (St. Gallen, Biel and Lucerne).

They managed to identify a number of reasons why they don’t have consolidated statements, but also difficulties they encountered when drawing up the CFR. Among the reasons for not presenting such reports we can mention: lack of interest or political pressure; high implementation costs; lack of legal obligations; and technical problems.

And among the difficulties encountered we can mention: lack of homogeneity of accounting standards between the controlling entity and the controlled one; lack of specific knowledge; cultural issues; and periodic retrieval of data and documents required.

The authors state that technically, consolidation is a significant lack (gap) of financial reporting of Swiss cities. Given the size of the cities, one can say that consolidation is more important for big cities, while for smaller cities, consolidation is less important, and the towns of cantons (states) that have adopted consolidation are more aware of the importance of consolidation and try to implement it at the same time with the cantons while others do not have such plans.

Through a theoretical research, Tagesson (2008) argues that consolidated reporting is needed in the public sector as a whole, but also for local administrations. At the same time, he shows support for proportionate consolidation in accordance with the acquisition method. He examines the aspects of the municipalities in Sweden, and concludes that one of the most important features for municipal accounting is comparability. This is an argument for consolidated reporting and for using proportionate consolidation in accordance with the acquisition method. Other arguments for proportionate consolidation refer to the fact that municipalities, to some extent, use jointly owned companies. Also, the full method overestimates costs for supply, delivery services, while the equity method underestimates them. Like Grossi & Pepe (2008), Tagesson (2008) concluded that public sector accounting has different objectives from private sector accounting.

As it could be seen from above, this line of research preferred an empirical analysis based on surveys, questionnaires and investigation. The study conducted by Gori and Fissi (2009) analyzed and assessed consolidated financial statements of the local government groups as a strategic tool, given the recent accounting standard and experiments in developing the group's consolidated financial statements of local authorities. The authors accomplished this through a comparative analysis of the latest standard with the current state of Italy, through a content analysis of CFS capacity of the local groups to provide strategic information to improve effectiveness and efficiency of public governance, but also through an examination - in a critical manner — of the experiences of CFS in Italy. Following these analyzes, she concluded that the consolidated financial statements can be validly used to support decision-making process of top management of local authority in planning, scheduling and controlling (even strategic) local public group activities and it could be both a powerful tool to achieve proper accountability when fragmentation of local activity in a number of subsidiaries makes accounting less informative. At the same time, they consider necessary to introduce immediate obligation to prepare consolidated financial statements for the local group because they are the only tools capable of assessing the economy of the economic entity constituted by the local authority and the local public companies and at the same time to compare the necessary costs required from the community for the services received and they consider the attempts of other municipalities as an opportunity to solve some problems that might occur when an instrument of accountability as complicated as CFS is used for the first time in such a complicated area.

5. Conclusions

The main result of the study was the knowledge of the directions used by researchers in the consolidated financial statements from the public sector.

In order to achieve qualitative research we divided the articles according to the main topic addressed. Thus, the few issues identified as being under review in international studies highlight the novelty of the public sector consolidated financial statements. Among these, we found that consolidation of local governments is the issue that is mostly analyzed at the international level, which is not surprising given the fact that local governments have more and more companies and independent administrations of local interest, and thus it requires a very accurate and faithful presentation of the whole local public sector. In addition to consolidation of local governments, we observed that the characteristics of consolidated financial statements of public sector - basic concepts, needs, usefulness, tendencies - is also a topic of interest and often debated in the analyzed articles. We can not say the same about standards related to consolidated financial statements applicable to the public sector, as this subject is still at the beginning.

So, we can conclude that:

1. Recent research on the characteristics of the consolidated financial statements of public sector: basic concepts, needs, usefulness, tendencies have achieved results according to which the public sector has some typical features which create difficulties in copying the private sector approach. Most studies have shown a tendency of copying the private sector accounting practices in the public sector and they try to highlight the benefits and the inconveniences of this approach. Thus, there is a need for further research in order to confirm or refute previous findings, but also to find the best option for these reports in the public sector;
2. Research on IPSAS - public sector standards on the consolidated financial statements still present a low interest. There are few countries that prepare consolidated financial statements according to IPSAS, as most of them either have their national standards, or apply IFRSs (standards applicable to private sector) also in the public sector; and
3. Research on consolidation of local governments is a very important issue and it brings a number of arguments for the development of consolidated statements in the public sector also. The lack of homogeneity of the accounting of local governments and municipal companies, insufficient knowledge about the consolidated reports, lack of personnel, and lack of mandatory preparation of such reports are not reasons that can not be overcome and thus the practice of consolidation of the public sector can be implemented.

Taking into account that it is a qualitative research, the limits of the study relate to:

1. The small number of items on the subject - however it is a completely normal thing due to the novelty of the practice at the international level;
2. The analyzed scope period of only 12 years in the context of the introduction of consolidated financial statements of public sector accounting system dating from the early 1990s. However, given the small number of items found in the period under review, we consider that the subject is only at the beginning and that current research analyzed reflects clearly enough the current knowledge stage;

3. The sample analyzed included a total of 19 international journals, which are representative for the study (significant as also indicated by other researchers in the public sector), but because analyzing the entire existing literature is imposible, our research is limited. The fact that we found a relatively small number of U.S. research may be due to the inclusion in the sample of selected journals of only one U.S. journal; and

4. The sample was limited to those items that were selected based on the keywords "public sector consolidated financial statements”, as a greater number of keywords might have resulted in a larger sample that would have been difficult to analyze, but also irrelevant to the subject studied.

Following the qualitative research conducted, through which we reviewed the main contributions on this topic, we noticed that research on this issue is only at its start and there are some research areas that have been insufficiently analyzed and where there is a need to continue and deepen the research. This need is also felt at the level of those research areas which are characterized by a substantial number of articles, but whose results need to be deepened and justified.

REFERENCES

Bergmann, A. and Bietenhader, D. (2008), Practises and opinions on consolidated financial reporting in Swiss cities, Paper presented to the Workshop on Whole of Government Financial Reporting: International Trends, The University of Siena, Italy

Broadbent, J. and Guthrie, J. (2008), Public sector to public services: 20 years of ‘contextual’ accounting research, *Accounting, Auditing and Accountability Journal*, 21, 2, 129-169.

Broadbent, J. and Guthrie, J. (1992), Changes in the public sector: A review of recent ‘alternative’ accounting research, *Accounting, Auditing and Accountability Journal*, 5, 2, 3-31.

Chow, D.S. L., Humphrey, C and Moll, J. (2007), Developing Whole of Government Accounting in the UK: Grand Claims, Practical Complexities and a Suggested Future Research Agenda, *Financial Accountability and Management*, *23,* 1, 27-54.

Christiaens, J. (2001), Converging New Public Management Reforms and Diverging Accounting Practices in Flemish Local Governments, *Financial Accountability & Management*, 17, 2, 153-170.

Christiaens, J., Cauwenberge, P. and Rommel, J. (2008), IPSAS 22: A new standard for WGA?, Paper presented to the Workshop on Whole of Government Financial Reporting: International Trends, The University of Siena, Italy

Christiaens, J., Cauwenberge, P. and Rommel, J. (2009), Debate: IPSAS 6 and 22 - new standards for whole of government accounting?, *Public Money and Management*, 29, 4, 216-218.

Goddard, A. (2010), Contemporary public sector accounting research – An international comparison of journal papers, *The British Accounting Review*, 42, 2, 75-87.

Gori, E., Fissi, S. (2009), The consolidated financial statements of local government's group as a strategic tool to evaluate performance of local public utilities. In: Emuni, Portoroz – Slovenia

Grossi, G. (2007), Accountability and Reporting: New Developments in Italian Local Governments, Paper presented on International Conference on Government Performance Management

Grossi, G. and Tagesson, T. (2007), Consolidated financial reports in local government: a comparative analysis of IPSASB and SCMA. Working paper Series 2007:4, Department of Business Studies, Kristianstad University College

Grossi, G. (2009), New Development: Consolidated financial reporting as a stimulus for change in Italian local government, *Public Money & Management*, 29, 4, 261-264.

Grossi G. and Mussari R. (2008), Effects of outsourcing on performance measurement and reporting: the experience of Italian Local Governments, *Public Budgeting and Finance*, 28, 1, 22- 38.

Grossi, G. and Newberry, S. (2009), Theme: Whole-of-Government Accounting: International Trends, *Public Money and Management*, 29, 4, 209-215.

Grossi, G. (2008), The Future Outlook for Consolidated Financial Reporting in Italian Local Governments: The First Experiences in the Tuscany Region, Paper presented to the Workshop on Whole of Government Financial Reporting: International Trends, The University of Siena, Italy

Grossi, G. and Pepe, F. (2008), Consolidated Financial Reporting in the Public Sector: a Cross-Country Comparison, Paper presented to the Workshop on Whole of Government Financial Reporting: International Trends, The University of Siena, Italy

Grossi, G. and Pepe, F. (2009), The concept of consolidation in the public sector: a cross country comparison, *Public Money & Management*, 29, 4, 251-256.

Grossi, G. and Steccolini, I. (2009), Critical analysis of IPSAS approach to consolidation, Paper presented to Critical Management Study on Accountability and Accounterability, Warwick

Grossi, G. and Soverchia, M. (2011), European Commission Adoption of IPSAS to Reform Financial Reporting, *Abacus*, 47, 4.

Grossi, G., Karlsson, J., Nilsson, M., Broberg, P. (2011), The Swedish approach to consolidation of municipalities annual accounts, Paper presented at CIGAR 2011 on Bridging public sector and non-profit sector accounting, Ghent

Pina V. and Torres L. (1998), Decentralisation of services and consolidation of annual accounts of local governments. Paper presented at International Conference on Accounting for the New Public Management, Venice, Italy

Pina V. and Torres L. (2003), Reshaping Public Sector Accounting: International Comparative View, *Canadian Journal of Administrative Sciences*, 20, 4.

Tagesson, T. (2008), The whole of government accounting – arguments for proportional consolidation, Paper presented to the Workshop on Whole of Government Financial Reporting: International Trends, The University of Siena, Italy

Tagesson, T. (2009) Debate: Arguments for proportional consolidation; the case of Swedish local government, *Public Money and Management*, 29, 4, 215-216.

Wise, V. (2006), Cross-sector transfer of consolidated financial reporting-conceptual concerns, *Australian Journal of Public Administration*, 65, 3, 62-73.

Wise, V. (2010), Theory and Accountability: The Case of Government Consolidated Financial Reporting, *International Review of Business Research Papers*, 6, 5, 82-97.