


Ricardo Luiz Sichel 

Universidade Federal do Estado do Rio de Janeiro (Unirio), Rio de Janeiro, RJ, Brasil.

Doutor em Direito da Propriedade Intelectual, pela Westfälische Wilhelms Univ. Münster, Alemanha.

Professor da Universidade Federal do Estado do Rio de Janeiro (Unirio). Professor Convidado da Faculdade de Direito da Westfälische Wilhelms Univ. Münster, Alemanha.

E-mail: ricardo.sichel@unirio.br

Debora Lacs Sichel 

Universidade Federal do Estado do Rio de Janeiro (Unirio), Rio de Janeiro, RJ, Brasil.

Doutora em Sociologia pelo Instituto Universitário de Pesquisas do Rio de Janeiro (IUPERJ).

Professora da Universidade Federal do Estado do Rio de Janeiro (Unirio), integrante do Comitê Científico da Faculdade de Economia de Wroclaw, Polônia.

E-mail: debora.sichel@unirio

RESUMO: O artigo relaciona a questão de gênero e como a sociedade se comporta ao criar os meios adequados garantidores do desenvolvimento social e econômico. O artigo considera a inovação como o resultado da forma de como os atores sociais interagem assim como a forma que a sociedade deseja introduzir tecnologias inovadoras com o objetivo de promover a qualidade de vida e o bem-estar social. Os dados obtidos por pesquisas realizadas na Europa e nos Estados Unidos da América são a base para o argumento deste artigo. Esses materiais foram elaborados por cientistas sociais, juristas e filósofos. Sopesa também a complexidade da estrutura social e a importância da igualdade de gênero para promover de uma forma justa o desenvolvimento econômico, onde todos os atores sociais podem lucrar com a inovação tecnológica. Também introduz a discussão do comportamento de gênero como um tópico importante a ser considerado quando a política pública de inovação tecnológica se apresenta. Considera ainda que a responsabilização da gestão deve ponderar a questão do gênero, a fim de avaliar o desenvolvimento alcançado devido ao uso de tecnologias inovadoras. O gestor tem a responsabilidade de garantir o uso adequado das capacidades humanas, o que inclui também a noção de igualdade de oportunidades.

Palavras-chave: gênero; desenvolvimento econômico; comportamento; tecnologia; inovação.

ABSTRACT: This paper relates the gender question, as a society behaviour in order to create the proper means to grant economic and social development. It is because innovation must be considered a result of how the social actors interact and the way a certain society desires to introduce innovative technologies with the aim of promoting life quality and social welfare. It also considers some data obtained by research undertaken in Europe and in the United States of America. These papers were written by social scientists, jurists and philosophers. They analyze the complexity of the social structure and the importance of gender equality to promote a fair form of economic development, where all members can profit from technological innovation. It also introduces the discussion of gender behaviour as an important topic to be considered when technological innovation policy is going to be introduced. It further considers that management accountability must consider the gender question in order to evaluate the development achieved because of use of innovative technologies. The manager has the responsibility to grant the proper use of human abilities, which also includes the notion of equality of opportunities.

Keywords: gender; economic development; behaviour; technology; innovation.

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1 INTRODUCTION

The present paper considers innovation, gender justice and accountability. They seem to be totally independent, one from another. But, as a matter of fact, they are quite related to each other. According to the research made, there is a link between them in such a way that allows us to believe that they depend on each other. This paper also introduces one key question, relating accountability in a way to analyse the company's performance, by considering not only its number, but also its policy related to the gender question. Accountability can be understood as a way to report data collected, showing the value of several tangible or intangible assets, but also as a means to understand and verify how the actors involved in the company, including its board, are committed to a fixed technological innovation development. Accountability links accounting and responsibility in a way to enable its shareholder to have a knowledge of how the company performs economically; it is a way to ensure the necessary transparency.

It is not a question whether they may exist independently or not. They can obviously exist on their own, but in order to promote social welfare, where the economic freedom is the basis of social and economic development, innovation plays a decisive aspect. It allows development. However, the fact that innovation is the consequence of Research and Development (R&D), which is developed at the enterprise and academic centers, must also be considered. R&D is a consequence of creativity, which means its sole producer is the human being. Therefore, gender equality also establishes the necessary basis for promoting this kind of research, because it enables the participation of any humankind without any form of prejudice.

The present paper starts analysing the notion of equal innovation, where the participation of managers is important. It considers management accounting a way of introducing modern forms of administration so as to promote innovation, because gender equality grants equal opportunities. The second part defines how gender, innovation and society are related. The research undertaken establishes the connection between these elements, since an unequal society is not able to promote fair conditions of work and therefore, there is a failure in fomenting technological innovation. This being so, gender equality also establishes the necessary basis for promoting this kind of research, because it enables the participation of anyone without any form of prejudice. Therefore, the third part establishes a connection between management control and innovation, based on the fact that research and development is a result of the way the organisation is administrated. The gender question also plays an important role because it enables the participation of all people involved in its process, without any kind of prejudice. It also launches the concept that gender equality enables innovation, when considered important by manager accountability. It enables better valuation of the company's assets.

For these reasons, there is a link between all these factors. Healthy development is based on human dignity, which is grounded on gender equality and which promotes creativity and increases the value of intangible assets. The valuation of these intangible assets will be demonstrated by an adequate management accountability. The manager, in order to develop the total innovative potential, should consider the gender question as the first step to enable it, because innovation is a consequence of human creativity, which will gain a higher level if all people are involved and there is a conscience of gender equality.

2 RESEARCH HYPOTHESIS

2.1 GENDER AND ACCOUNTING

There are many papers, which relate the company's gender equality with its capacity of innovating. They are because equal participation of all people involved enables and foments creativity (Fan, 2011) which is the basis of technological innovation. Therefore, there should be a way to analyze this data and all figures related to the development of the intellectual capacity of a company. One form to examine this data is via accountability, where the accounting firms offer the necessary information to enable business decisions (Boaz; Blewett, 2009, p. 42; Swietla, 2015, p. 176).

H1: There is a link between gender equality, technological innovation and the way it is analyzed by the accounting function.

2.2 THE ACCOUNTING DATA ANALYSIS

The company is managed by the way the data collected is interpreted. All this collected information, which contains the activities of the collaborators is included in accounting reports, in a way that enables the decision-making board to fix the company's target and the way to implement the necessary measures to gain the expected results. It will also allow correction of errors made and, therefore, not fail to reach the proposed results. Those reports include the participation and how any gender discrimination may impact in a negative form in the outcomes obtained (Kahle, 2004, p. 962; Unterhulter; North; Ward, 2018, p. 12; United [...], 2018, p. 1).

H2: The non-financial accounting information evidences the importance of gender equality.

3 THE NOTION OF EQUAL INNOVATION

The notion of management accountability is based on the concept of its objective. Therefore, its participation on the company's strategy is understood. This concept was studied by Robert. W Scapens (2006, p. 15):

Central to this framework is the notion that management accounting practices are part of the organisational rules and routines, which enable organisational members to make sense of their actions and the actions of others. Furthermore, if they are widely shared and underpinned by accepted meanings they reduce the potential for conflict in the organisation. Finally, together the rules and routines comprise the organisational knowhow.

It also characterizes a competitive advantage for the business (Dyczkowska, Dyczkowski 2015, p. 4) gaining a higher value than tangible assets.

Consequently, the management accounting should consider the way the company is organized and how to improve it, to maintain its market-share and to make it considered innovative by consumers. Social media plays an important role in achieving this goal, as it shows which is the company's main personal policy. An innovative company with an archaic form of dealing with its personnel won't be considered as such by consumers. But an innovative company, based on a modern policy in dealing with its personnel, where environment and gender questions are a vital part, will be able to be considered as such by consumers, because its internal praxis enables equal participation. Managers' accounts should be able to stress this point, considering it vital in order to gain better results when evaluating the company's assets. The western modern society considers the company as a whole, including internal policies, to classify a determined company as innovative and up to date with modern administration practices, which also include equal opportunities. So, management accountability is not limited to analysis of numbers, but it should also introduce new ways of administration to obtain better results.

The concept of intellectual property is based on technological development, which is a consequence of a Research and Development (R&D) policy. It is necessary to understand the notion of technology (Barbosa, 1998, p. 24):

Technology is defined for this project as all the knowledge necessary for the productive functioning of an enterprise. The term can embrace hardware, such as factories, machines, products, and infrastructures (laboratories, roads, water distribution systems, storage facilities) and software, including non-material ingredients such as know-how, experience, organisational forms, knowledge, and education. It is a dynamic, continuing, sequential, and complex process.

Technology is the result of a complex process in order to solve a certain problem. The way it is solved, is a consequence of how the human being understands it. It is not an artificial concept, but a sociological phenomenon in order to understand and solve certain difficulties. For this reason, the technological development is also based on how society behaves, and it can't be understood in a different way, because the notion of research to increase economic and technological development is a human attitude towards a determinate situation.

At this point it could also be wondered if R&D is always a logical construction, based on a scientific method, or if it is a consequence of an empirical study as well, resulting from mere observation of nature in order to understand the way it works. Therefore, it can be observed (Merton, 1973, p. 5):

To reiterate a point made above, the path of theoretical development that can be traced out well after a series of interrelated papers has appeared need not reflect their chronology; it is as through the theoretical progression exists in two

dimensions and the scholar in a third, for he is free to move back and forth along this line of development as opportunities present themselves, with little regard for the logic inherent in the theory itself.

The research starts with the observation of the environment in order to analyze a certain unsolved situation. The observer wonders if there is a way to solve it and how it can be done. It is how a definite situation is understood, that will enable its understanding, which also comprehends the social actors involved. These social actors play a decisive role in the research made, trying to find an answer to solve a determinate problem, which is more effective in a society without any form of racial or gender prejudice. It is therefore imperative to examine how the innovation, as a social phenomenon, interacts with the economy. It is not an act based on random circumstances, but a consequence of several actions which has the intention of achieving an expected result, which, however, may not be obtained. There is an economic basis in order to grant that the costs will not be more expensive than the profit expectation. This point is also mentioned by Dobbin (2004, p. 256):

In this account, the former set of transactions is internalized within hierarchies for two reasons. The first is "bounded rationality," the inability of economic actors to anticipate properly the complex chain of contingencies that might be relevant to long-term contracts. When transactions are internalized, it is unnecessary to anticipate all such contingencies; they can be handled within the firm's "governance structure" instead of leading to complex negotiations. The second reason is "opportunism," the rational pursuit by economic actors of their own advantage, with all means at their command, including guile and deceit. Opportunism is mitigated and constrained by authority relations and by the greater identification with transaction partners that one allegedly has when both are contained within one corporate entity than when they face one another across the chasm of a market boundary

The way a R&D project develops, is a task to be understood. Its economic importance includes the interaction of social behaviour and technological development. It is a way to comprehend how a certain fact has appeared and its logical reason to explain it (Webster; Watson, 2002, p. 19). Therefore it is important to understand that technological development, based on R&D can only be analyzed as a consequence of the social understanding of its importance. There is a natural link between how society deals with the innovation and how it is fixed in order to improve technological level.

4 GENDER, SOCIETY AND INNOVATION

The gender question plays a key position in how innovative a society is. If the society is not egalitarian, it will not achieve its goals in order to improve technologically, because part of the society will not be considered in an equal way. It is not a question of male or female, in a binary view of the gender issue, but considering its complexity, in order to achieve a comprehension of how the social structure deals with it. It is how it is considered that will settle the basis of an innovative society, considering also the concept fixed by Judith Butler (1999, p. 149):

Since this discarding follows upon the exercise of a full invocation of "I," women speak their way out of their gender. The social reifications of sex can be understood to mask or distort a prior ontological reality, that reality being the equal opportunity of all persons, prior to the marking by sex, to exercise language in the assertion of subjectivity. In speaking, the "I" assumes the totality of language and, hence, speaks potentially from all positions — that is, in a universal mode. "Gender works upon this ontological fact to annul it," she writes, assuming the primary principle of equal access to the universal to qualify as that "ontological fact."

The gender question is an important protagonist in fomenting technological development. Societies which are more egalitarian tend to innovate more, because there is an incentive for all their members to act in order to promote innovation. This point is also observed by Mona Lena Krook e Jacqui True (2012, p. 110):

While sometimes this flexibility can be a resource for continued innovation, it can also present ongoing challenges for defining and institutionalizing a new norm. In campaigns to end the practice of whaling, early ambiguities regarding the bases for a ban — spanning concerns about animal welfare, natural resource management and the environment — created opportunities for powerful counter-frames linked to aboriginal and other types of cultural rights. As a result, the anti-whaling norm diffused across the international system, but because it was not embraced by actors in key whaling states, its effects were undermined (Bailey, 2008). These events suggest that domestic actors may reject the frames given to an issue at the international level.

This is a way to understand that innovation is a complex result of people working together. It can prosper if the local environment is not based on gender prejudice, as a collective construction of the human being, trying to increase the innovation level as a result of its creativity. Therefore, the positive impact for R&D development in a society that treats its members equally has to be considered, as analyzed by Ewa Latoszek (2015, p. 48):

Europe can become a better place to live and work, though: an open access to scientific publications, a clear and ambitious budget for research and innovation in renewable energy sources and energy efficiency, a substantial budget for SMEs, gender equality, better control of public-private partnership, a proper role of social sciences and humanities, genuine dialogue between science and society about contributing to the integration of scientific and technological endeavour into the EU society and strengthening researchers' competences and skills. 30% of the Horizon 2020 budget will be devoted to societal challenges – reflecting the problems which are major concerns to citizens of the EU and improving people's lives through improving the Union's competitiveness, boosting growth and job creation. If we want science to be a priority for public investment, we need the EU citizens to share scientific values and recognize how science contributes to progress.

The way the social actors act in a R&D procedure has a direct impact in the form innovation develops. It is also important to consider that gender equality is not merely a result of behaviourism. On the contrary, it is the society's attitude toward all its members, without discrimination of gender orientation. If there is any form of discrimination, a direct impact of productivity will be the consequence. As a matter of fact, it is still a problem which occurs, as pointed out by Shaffer (2000, p. 396):

Increasing numbers of women in labor markets around the world have resulted in various positive outcomes for both working women and the organisations that employ them. Despite many positive outcomes; however, gender discrimination in employment decisions and sexual harassment are widespread problems for women and organisations worldwide (Fitzgerald, Drasgow, Hulin, Gelfand, & Magley, 1997; Gruber & Bjorn, 1982; Gutek, 1985). Women who experience discrimination and harassment may also experience career and job loss and a variety of physical and psychological effects (Fitzgerald et al., 1997; Goldenhar, Swanson, Hurrell, Ruder, & Deddens, 1998; Hulin, Fitzgerald, & Drasgow, 1997; Schneider, Swan, & Fitzgerald, 1997). Outcomes for organisations in which gender discrimination occurs may include increased turnover of valuable employees, litigation expenses, damage awards if found liable, and negative

publicity that may result in numerous unmeasured deleterious effects (Hanisch, 1997; Knapp & Kustis, 1997).

Society is based on a complex relationship of its members. It is formed as a result of the ability to tolerate the coexistence of different backgrounds without determining a hierarchy level, and by the acceptance of the difference as a form of enriching its capacity to produce innovation as a basis of economic development. The gender relationship will affect the way technology is developed (Venkatesh; Morris, 2000, p. 117):

Specifically, we propose that gender will moderate the perceived usefulness-intention, perceived ease of use-intention, subjective norm-intention, and perceived ease of use-perceived usefulness relationships. We further examine the role of experience as an additional moderator of the different relationships. In studying acceptance and use of a technology, it is important to examine the phenomenon over a duration of time since users will evolve from being novices to experienced users of the new system (e.g., Davis et al. 1989). This is of particular importance since during the earliest stages of technology introduction, users are making an “acceptance” decision, which has been shown to differ systematically from “usage” decisions over the long term as user experience increases (e.g., Davis et al. 1989).

The use of new technologies is also considered aligned with different factors. It is also vital to understand the status of gender equality as an important step to improve the research of innovative technologies and their development (Venkatesh; Morris, 2000, p. 117). The way social institutions are considered and transformed is becoming more liquid, without the former rigid structure (Bauman, 2006, p. 7): “The liquidizing powers have moved from the 'system' to 'society', from politics' to 'life-policies' - or have descended from the 'macro' to the 'micro' level of social cohabitation”.

The established social structures have been changing very quickly. The post modernity structure is continuously fluctuating with the transformation of all the existing social relationships in order to promote the way society has changed. It is a new form of understanding the social transformation by a new aegis of liquid modernity, as considered by Bauman (2006, p. 79):

As a matter of fact, however, the status of all norms, the norm of health included, has, under the aegis of 'liquid' modernity, in a society of infinite and indefinite possibilities, been severely shaken and become fragile. What yesterday was considered normal and thus satisfactory may today be found worrying, or even pathological and calling for remedy. First, ever-new states of the body become legitimate reasons for medical intervention - and the medical therapies on offer do not stay put either. Second, the idea of 'disease', once clearly circumscribed, becomes ever more blurred and misty. Rather than perceived as an exceptional one-off event with a beginning and an end, it tends to be seen as a permanent accompaniment of health, its 'other side' and always present threat: it calls for never-lapsing vigilance and needs to be fought and repelled day and night, seven days a week. Care for health turns into a permanent war against disease. And finally, the meaning of 'a healthy regime of life' does not stand still. The concepts of 'healthy diet' change more quickly than it takes for any of the successively or simultaneously recommended diets to run its course.

The new social structure which was formed is also a consequence of the transformation, caused by immigration. Massive immigration is not a new phenomenon (Bauman, 2016, p. 3) Many countries, especially in America, have their social basis formed by immigrants. They impact society, by transforming its aspects and enriching its way of considering the world. The question to be asked is, how gender equality, as a form of social behaviour, impacts the value of

innovation products and, therefore, influences accountability values.

It is quite clear that gender discrimination impacts technological development in a negative way. The gender equality index is a way to analyze the situation. In Europe the gender equality index is based on six factors, including the job, the financial situation, the knowledge, the economic activities, the political power and the health. All these concepts establish a direct link between innovation development and gender equality. It promotes social change and contributes to the development of democracy as a value to be considered (Aikman; Unterhalter, 2005, p. 4). Democracy is also the basis of economic freedom, which has the equality of the human being as its center. Without economic freedom and democracy there is no place for proper technological development, which has the quality of life as a basis. Innovation is useful if the welfare of the human being is considered. It is questionable whether innovation is worthy without considering the social benefit. Technological progress achieves its objective if it improves the human quality of life.

In a society where these values are considered, the development of new ideas may be obtained. It has an important impact on the management accountability. It must be considered that women's participation on a company's board has a direct impact on its innovative capability. It also explains that social innovation plays a decisive role and it could be defined in the following way (Kaplan, 2017):

‘Social innovation accelerator’ Village Capital brings together cohorts of entrepreneurs with new ventures to develop their business potential. The goal — as with all innovation accelerators — is to help new ventures make their business more viable through training, mentoring and networking. In this program, two of the ventures from each cohort are selected to receive funding at the end of the program.

Without even having gender in mind, Village Capital's leaders had a discussion about the mechanism they were using to make these investment decisions. In most entrepreneurial settings — Silicon Valley being the prime model — you pitch your venture to a panel of investors. But research shows that pitching is actually a highly-gendered, ‘masculinized’ process. At Village Capital, they wanted a new model for their due-diligence process — so they decided to focus instead on peer mentoring and peer evaluation. They thought, ‘Wouldn't it make more sense to have the actual participants — the entrepreneurs themselves — vote on which of their peers should receive funding?’

Gender equality, as a basis of an innovative society, has a direct impact on the value of inventive assets. This aspect must be considered by the accountability and the way a certain behaviour impacts on the asset's price. Accountability which has not considered the gender participation in society, has not considered the multiple transformations of the last 40 years. Research and development (R&D) is an important mechanism for economic development and also enables the creation of valuable assets. Therefore, it is necessary to establish a relation between the economic sector and the academic one. Management control takes the assets value into consideration. Its expansion has also an impact on the development of these three sectors as the basis of economic development. In order to promote economic growth, it is also significant to ensure the efforts of the managers of the enterprises in the expansion of their activities, by granting a predictable legal regulation.

The purpose of management control and even considering the risks involved have a direct impact on how a certain project is launched, how to involve personnel in it and also considering the protection of IP rights, according to William W. Fisher III and Felix Oberholzer-Gee (2013, p. 161):

IP rights grant exclusive market opportunities, but the value of these opportunities often depends on the strategic actions of rival firms. Their response is important because they often have the ability to influence the overall

value of a market. For example, if a firm terminates a joint marketing campaign because its competitor secured an important patent, the market share of the competitor might increase but the overall value of the market can decline.

Since the patent is a consequence of R&D policies, it is important to consider if the funds comes from public or private budgets. The G-20 countries, according to OECD, have a different participation form of R&D, if GDP is considered. There is a major participation of the business sector and a lower percentage of the Government. In Europe and Latin America, the Government's participation is more significant (Global [...], 2013) This report compares how innovative a country is and how the public and private sectors invest in science and technology. It is also to observe, that the best rated countries are more equal in a gender point of view. It seems clear that the highest level of GDP invested in science is made in countries with a high level of human development, which also includes the notion of gender justice.

Therefore, innovation plays a decisive role in promoting economic development. But it is a consequence of social activity and it is a positive consequence of how a society treats its members. Social behaviour, based on gender equality promotes economic and accountability benefit, which will be distributed to all its members. It won't be a form of economic development where the society does not gain any profit, on the contrary, it will lead to social welfare. For this reason, the human being must be considered as an individual, where their individuality will not be the cause for any kind of prejudice, in order to promote innovative development and so increase the value of intangible assets.

5 THE IMPORTANCE OF AN INNOVATION COMPANY

Once considering an innovative society, how this will be analyzed by the management control must also be studied. At first hand, its status is a consequence of the necessity to give a certain value to the result of the R&D procedure. It is the way the company evaluates how worthy the investment was. On the other hand, a creative enterprise is the result of the participation of all people involved in its target. Improvement is a consequence of the human experiment, trying to find a solution for a certain social fact. Therefore, it is also important to observe the conclusions by Poskela and Martinsuo (2009, p. 681):

The more technology uncertainty, the more negative association there was between front-end process formalization and strategic renewal (H2c, this was only marginally supported and thus needs to be interpreted with caution) and outcome-based rewarding and strategic renewal and (H3c). Front-end initiatives under high technology uncertainty aiming at strategic renewal are long-term technology development initiatives that need a lot of free-wheeling in order to find a right direction and solid decision criteria (Moneart et al., 1995). They need more trial and error attitude where technological solutions develop with small steps, rather than formalized and planned processes. It is likely that in the very front end of innovation, uncertainty is purposefully sought to identify new opportunities, and collaboration across units is exploratory and difficult to frame in process models.

Innovation impacts on the daily activity of the company. Its main goal is to improve profit, grant its market share. But how to grant its market participation, without being aware of the constant innovative movement? It is a consequence of how the social players interact, which also embraces the aspect of gender and behaviourism. The society is the result of this behaviour. An oppressive society may be developed in certain economic sectors, but it won't be able to fulfill the expectation of its members. An equal society is innovative, and this has a direct impact on how business manages the innovation assets produced. It is a part of the enterprise's culture, as stated by Langfield-Smith (1997, p. 211):

Miller and Friesen (1982) categorized firms as conservative or entrepreneurial, using the extent of product innovation. The two types differed in their degree of environmental hostility, organisational differentiation, environmental heterogeneity and technocratization. Conservative firms engage innovation with reluctance, usually as a response to a serious challenge. Entrepreneurs aggressively pursue innovation, and control systems were used to warn against innovation.

This kind of analysis has become important in the way business is conducted. There is a necessity to understand that the enterprise's target has a social importance, not just economic. The social players try to play an important role in the way the economic goals are fixed, taking environmental questions and also labor conditions into account. This was also observed by Justyna Fijalkowska and Malgorzata Macuda (2017, p. 62):

Currently, many companies are required to conduct business realizing not only economic but also social and ecological objectives. The scope of responsibility for a business's actions is significantly expanded. Thus, it is becoming more and more frequent for companies to take into account social and environmental goals, in addition to their economic goals.

A conservative business innovates in order to survive and to grant its market share. On the other hand, an innovative business wishes to gain higher market participation, by producing an unexpected product or by supplying an unpredicted service. It is part of the business culture to introduce an unprecedented product/service, which will show how innovative a society is. Considering the gender issue as a part of the innovative culture, it is possible to conclude that all these aspects will also be taken into account when evaluating a new product/service. The radical innovation will have a direct impact on the way the social actors behave (Chiesa, 2009, p. 420).

It is also imperative to wonder about the value of innovative assets for its titleholder; how to understand it and the way to manage it, in order to keep its rate. There are certain circumstances where the proprietor is not able to interfere to keep its value, as for example, in the case of a certain patent. An invention protected by Patent Law has a legal validity; after this period of time the object may be produced by anyone without any license. The innovative product could also be commercialized by a certain trademark. The consequence of this lapse of time may have a direct impact on the trademark's value, too.

There are several examples that indicate that the existence of a trademark by itself will not ensure its value, although the brand is registered in 6 different ways in the USA (USPTO), in one way in Great Britain, and in the European Trademark Office (IPO). The manager of the enterprise must be aware of the legislation related to innovation protection in a way to protect the value of an important asset or to be prepared when it won't have any value. In this case, an innovative creation will replace the new one. This will be a consequence of how pioneering the business culture is.

The business and legal managers are also responsible for guiding the board in order to protect their assets. They are liable to develop the business strategy in order to continue innovating, which will be a part of its culture and a consequence of how it relates to racial and gender matters. It is an aspect to be considered from a political point of view, where the business is considered a part of the society and also shows its social development, which is related to the promotion of human equality. It'll have a direct impact on the business culture, which is the value and beliefs shared by personnel in the organisation (Martins; Terblanche, 2003, p. 65), with a direct impact on how innovative the company will be. The enterprise is made up of people who work in order to achieve a certain target. The business culture of a company may foment innovation to grow and gain a better position in the consumer's market. The employees should be stimulated to innovate as a way to promote their skills. This was mentioned by Martins and Terblanche (2003, p. 64):

In some organisations, action is taken to stimulate creativity and innovation. The right steps may have been taken, such as involving personnel in decision making, recruiting and appointing personnel with creativity characteristics, setting standards for work performance and giving regular feedback, but creativity and innovation are hampered in some way. The culture of an organisation may be a contributing factor in the extent to which creativity and innovation occur in an organisation.

The point is that an innovative cultural business should also be considered by its managers, because it'll promote the development of R&D, with a direct impact on the way it achieves its targets. It is, therefore, a way to motivate the imagination of the employees, encouraging them to create and innovate, without fear of not reaching a proposed target. It will be only possible in a place where human dignity is respected, and everyone has the possibility to improve their skills.

This way of managing a business is going to have an impact on its assets value, more specifically, its intangible ones. The reason is how the enterprise promotes innovation and makes it a part of its culture. The innovation policy needs a space of freedom in order to fulfill its main objective: promote social and economic development, as a way to ensure a better quality of life.

6 ACCOUNTING: HOW IT REACTS TO GENDER EQUALITY

Accounting is based on information. It may seem on the first and, that it is internal data, important to managers and investors of a determined company. But on the other hand, it has got the report how a certain company acts to achieve its targets. In general, it is based on reports that were issued in order to proceed to diagnosis of the company. This analysis is based on facts that have occurred, but also has the purpose of planning its future activity. It includes many factors, as stated by Millar (2012, p. 4):

The principle of accountability needs to be embraced by business if it is to get out of the mire that it is caught in now. We have forgotten the universal truth and principles of accountability and integrity to our cost. As both sides, employer and employee, embrace their accountability, the engagement on both sides can improve for the better.

There are several aspects to be considered, even by people external to the company. The publication of accountability information grants Governmental Agencies and also the private sector the necessary information to understand how the enterprise is handling aspects related to the way it focuses on its business, but also how important social aspects are and how it considers employees as a part of its functional existence. Malgorzata Macuda (2015) states the existence of an external and internal accounting system, which consists in a way to understand the purpose of the company. It must also be observed (Macuda, 2015, p. 330):

Accounting constitutes an information system, in which financial information plays an important role and whose principal purpose is to meet information needs of its internal and external users. Taking into consideration such a division of users, Chluska (2004, pp. 553–555) distinguishes: external accounting information function (accounting provides information for different entities, such as banks and government agencies, as well as for individual customers and suppliers), and internal accounting information function (accounting provides information for managerial purposes, which is used as a basis of managers' decisions).

It is not just a way to analyze the numbers, and the data, but to acquire the necessary knowledge of the company's action toward a more inclusive society. There is also evidence to

understand what a company is made of. It is not just made of assets, but it is developed by the action and commitment of its personnel. They are an important asset of the company and should also be considered by accountability. According to Millar (2012, p. 4), the accounting information becomes more real if there is consideration of the social actors involved:

Being accountable means accepting that we play a part in everything that has ever happened to us and in everything that is happening to us. This principle is one of the most challenging aspects of life, and also one of the most empowering. To realize that we have a part to play in our world is to know that we have the power to change our world and solve our problems. If we take the position that we are not accountable for our lives, we leave ourselves powerless and must see ourselves as in some way victims of events in our lives.

There is an obvious link of how a more diverse company can generate better ideas. Inclusive business also stimulates the participation of its researchers and employees in order to fulfill its purpose. The conclusion made is based on innovation impacts based on gender equality policies, which are mentioned by accountability reports (Fan, 2011):

In the graph, the vertical axis shows management assessments of a series of employee ideas related to supply-chain management. The horizontal axis measures the level of diversity in an employee's internal connections. As you move to the right, you see employees who are more insular in their connections. They lack diversity of input in their day-to-day world. The graph indicates that higher diversity of connections also translates to the perception of higher quality ideas, which is a fundamental component of innovation.

It must be stated, on the first hand, that research and development (R&D) expenditures are accountable. But on the other hand, it must also be considered that they are a consequence of the commitment of all employees involved and if there is any form of prejudice it'll certainly impact in a negative way in the accountability report. The accountability report enables the interested actors to acknowledge how a certain company is managed. So, the first aspect is because capital expenditures have to be included in accountability reports, as considered by Bialek-Jaworska (2016, p. 692):

The new regulations do not require the recording of the purchased items into the register of fixed assets or intangible assets, rather their inclusion in the accounting records. Therefore, the direct expensing of these R&D expenditures is allowed. In addition, eligible costs include expenditures related to the R&D activity. These initial research activity costs - as before - will be immediately expensed both for the balance sheet and tax purposes.

If R&D activities are accountable, it should also be considered that they are a consequence of human activities, where personnel also play an important role in the accounting. It can be considered a social responsibility of the company in a legal, economic, and ethical dimension (Hadi, 2018, p. 246). The necessity to measure it is obvious, since it shows how inclusive a company is, which is one form of demonstrating its social responsibility and also the up-to-date evolution of the employee/employer relationship. Hadi (2018, p. 245), also observes:

The NH Approach is a measurement instrument that can be used to measure social responsibility performance. The NH Approach is used to measure social responsibility performance in various fields in a more specific manner. In its

measurement, it is not only limited from the company side but also from the stakeholder side. From the output obtained various aspects can be known, such as the satisfaction level, the claims, and the level of social responsibility that has been implemented by a company can reduce or eliminate the negative effects of company operations.

Therefore, the notion of social responsibility enters the accountability systematically. It establishes a process, where non-financial values are also considered, as it is explained by Macuda (2016, p. 79):

Socially responsible accounting is a process in which a business entity presents information related to its activities in the social, environmental and economic areas. Krasodomska [2010, p. 337] claims that the task of external (financial) social accounting is to show how the entity integrates with the society and the environment in which it operates, whereas the task of internal (management) social accounting is to provide information that will help the managers to run the business in a more socially responsible manner. Both external and internal social accounting do not function on their own, they should be integrated with the entire financial and management accounting system of a given entity. Stępień [2009, p. 355] highlights the fact that the role of accountancy in social responsibility results from the nature of this information and control system, which (1) enables the value and quantity measurement of the factors that shape the CSR components, and (2) helps to control the realization of corporate social responsibility. Namely, it allows the entity to make a settlement concerning its activity within the social, environmental and economic areas, on the basis of the appropriately structured report.

The enterprise's activities are fixed by its board and managers. The fixed objectives determine how to administrate the company and the proper use of the personnel involved is also considered. It implies the concern of internal policies related to innovative ways to manage, considering that engagement is a necessary step to get the desired targets. If the company continues to act in a way not compatible with the current behaviour related to gender equality there might be a lack of participation of the employees or, at least, a lack of cognizance in considering the company's success as part of a personal achievement. By embracing social responsibility, a sign for the global players is offered: (Macuda, 2016, p. 81):

Embracing a socially responsible conduct is perceived as strategic in a global market, it contributes to the competitiveness of a particular entity and protects its external image. Therefore, the social responsibility is an expected policy not only in strategic planning but also in daily practice.

The evolution of labor relations has been constant since the Middle Ages. The awareness of its importance and the knowledge of not being just a means of production has transformed these relations. There are several companies where employee representatives take an active part in the board's decision-making since they show a brighter social commitment to the business. This participation will be reflected by the numbers collected by the accounting control and even a lack of this participation is also reflected in those numbers. Accounting has been transformed from a cold number analysis into a global view of the company, considering the participation of all social actors.

Women's participation in society has been growing in the last 50 years. Accountability as a science considers this new form of participation, even in the way it accounts for education. Proper figures must be considered, in order to highlight this kind of participation, considering that the education system is the basis of enterprise development. Therefore, the numbers start to be considered at this sector, in the way Kahle (2004, p. 961) shows:

As I think about how accountability in education, particularly how its most recent permutation (high-stakes testing) has affected, changed, or improved the education of girls and the lives of women, I realize that much of the work in gender has been about accountability — about making measures appropriate for girls and women.

The latest capitalism evolution considers the participation of all social actors. There has been a huge transformation after World War 2, especially after the economic transformations that occurred in Eastern Europe/Latin America after 1989. The German notion of social economic by Konrad Adenauer transformed the way trade unions, the NGO interacts with the private productive sector. The gender question is not limited to the political debate but was also introduced in the company's management as a way to increase its innovative capacity. The accountability of the company is therefore much wider, including social relationships, as Hollander (2012, p. 3) emphasizes:

Even if people choose not to meet gender expectations, they can hardly help responding to them. Finally, accountability links the interactional doing of gender to social institutions and structures:

While it is individuals who do gender, the enterprise is fundamentally interactional and institutional in character, for accountability is a feature of social relationships and its idiom is drawn from the institutional arena in which those relationships are enacted. (West and Zimmerman 1987, 136-37).

It is important to emphasize that the way West and Zimmerman use the term accountability is quite different from its everyday sense of holding someone responsible for their behaviour.

There is a strategic part in those reports. They deal with employees and how they are involved in R&D and other activities of the company. It is to be noted that this commitment is what differentiates an inclusive and social responsible enterprise from one that is not conscious of the importance of considering the full participation of all actors involved in the productive sector as a necessary step to implement a modern form of administration, which is more open to innovation. This concept was also stated by Dyczkowska and Dyczkowski (2015, p. 4):

Steiner (1979) maintained that one of pitfalls of corporate planning was a failure to appreciate the necessary involvement of front-line staff. To avoid that pitfall, three conditions must be met. Firstly, employees should have adequate information. Secondly, they must be authorized to make decisions and be rewarded fairly for meeting objectives. Finally, they should have every opportunity to develop the necessary competencies (Lawler, 1986; Ledford, 1993; Scott and Tiessen, 1999). Strategic awareness together with a high degree of empowerment contribute to an enhancement of motivation and to employees' commitment to a corporate strategy. Employees may spot business chances and adopt improvements, and in doing so they can shape management control systems.

It also implements the strategic relation between all participants. This statement is since the previous knowledge enables the way the people involved behave and how they contribute to achieve the targets. If it is not completed there might be a chance of an analysis in order to examine which were the causes of no success. This link was also observed by Dyczkowska and Dyczkowski (2015, p. 27): "The analysis presented in the paper proved a relation between strategic awareness and goal-setting, a control framework and an organisation of control in SMEs operating in Poland".

Therefore, it is possible to conclude that innovation is a consequence of the way the company understands its personnel importance. It is based on the commitment when the actors

involved feel that they are a part, not gender discriminated and considered by the board, in a modern way of understanding the position of the employees in the company. This new position and relationship, as a transformation of labor conditions has been analyzed by many researchers. It is a new business with its social responsibility reported on documents. This publicity is made possible by accountability reports, which publish not only an overview of the company, but also how it handles its personnel, and how ethical and inclusive it is. These data, which form the mentioned reports, enable the understanding of how innovative the business is and strengthen the link of gender equality, innovation, social responsibility of the business and how its data are accounted.

7 CONCLUSION

The present paper concludes that innovation, the increase of intangible assets, should be termed as economic development, when the social criteria are also considered. The modern society is a consequence of the political and economic development, where the democratic values should be considered. Hypothesis 1 has been proven, since the foment of technological innovation at the enterprise's level is a consequence of the participation of all involved actors with the purpose of achieving a determined task; it won't work properly if this effort is undermined by any form of prejudice and the resulting consequence of lack of involvement of all players. This has a direct impact on the company's result. The management board acquires the proper information in order to correct misunderstandings or errors in the way the personnel's administration is being done. Accountability plays a vital role in order to provide this kind of information, which proves the second hypothesis.

A democratic society considers all human beings equals. Gender equality, as the basis of a democratic society, enables the development of innovative procedures, by permitting all persons to use their potential to promote technological development. This technological development, which is not based on any form of injustice, may transform the society, achieving better standards and fomenting economic and social development. The consequence is also measured by accountability, by the way it fixes the value of intangible assets, not only as private ones, but considering the social benefits.

Therefore, it is also relevant to understand how an innovative product/service appears. It is based on research, where the society's potential is considered. The way the social actors' performances contribute to increase the development level. It is not just a behavioural question, but a way to understand that all members of a certain society are important to build a new world, changing the present reality, trying to solve determinate problems and enabling an improvement of quality of life. The point to wonder about is what is meant by this concept; is it just a material improvement, or must it consider an improvement of the society? It may seem utopic, but some of the present-day technological improvements were considered as utopia in the past. The persistence in order to improve a new technique has enabled mankind to reach a higher development level. In this way, it should be mentioned that the human being has to be considered and that any kind of discrimination hinders the desired growth. Any kind of technological development which does not consider the human being as its center will not fulfil its main objective. It means that an equal society, where gender equality is considered and where behaviour leads to the establishment of the basis of economic and social development, considers all social actors involved.

The behavioural criteria, on one hand, represent a key factor which won't lead to development by itself. But, on the other hand, its absence will hinder this kind of growth. The reason of this concept is since in an unfair society, only a certain privileged group will profit from the technological improvement, which is completely different from a society where equality is considered its basis. In the latter, the profit originated from the innovation will be distributed to all their members. Behaviourism has to be considered as a vital point in order to reach a higher level of technological growth, obviously based on social justice.

This paper contemplates innovation, gender justice and accountability, and its contribution to social development. They seem to be totally independent from one another but as this paper exposed, they are quite related to each other. Apart from this observation, there is a lot of

research undertaken which establishes a link of accountability reports with information of how the company handles questions related to its labour. They are aspects which are not based on the value of assets, but on the impact of a positive and inclusive agenda on the results obtained by the enterprise, especially if they are related to R&D, with a direct impact on technological innovation. It also shows that it is not quite feasible that a company with unequal working conditions, is able to achieve significant development on technological innovation. The criteria of social responsibility, which should be a part of the accountability report, enable the interested parties to figure how the company understands the importance of ethics in order to perform as planned.

REFERENCE

- AIKMAN, Sheila; UNTERHALTER, Elaine. **Beyond access: transforming policy and practice for gender equality in education.** Oxford: Oxfam, 2005.
- BARBOSA, Denis Borges. **Contratos em propriedade intelectual.** 1998. Disponível em: https://www.dbba.com.br/wp-content/uploads/contratos_pi.pdf. Access: 04 apr. 2024.
- BAUMAN, Zygmunt. **Liquid modernity.** Cambridge: Polity press, 2006.
- BAUMAN, Zygmunt. **Strangers at our door.** Cambridge: Polity press, 2016.
- BIALEK-JAWORSKA, Anna. A scientist in the board effect on recognition of R&D outcomes in private firms' reports. **Journal of Accounting and Management Information Systems**, Faculty of Accounting and Management Information Systems, The Bucharest University of Economic Studies, v. 15, n. 4, p 683-709, dec. 2016.
- BOAZ, Annette; BLEWETT, James. Providing Objective, Impartial evidence for decision making and public accountability. **The Sage Handbook of Social Work Research**, London, p. 37-48, 2009.
- BUTLER, Judith. **Gender trouble: feminism and the subversion of identity.** London: Routledge, 1999.
- CHIESA, Vittorio. Exploring management control in radical innovation projects. **European Journal of Innovation Management**, v. 12, n. 4, p. 416-443, oct. 2009.
- DOBBIN, F. **The new economic sociology.** Princeton: Princeton University Press, 2004.
- DYCKOWSKA, Joanna; DYCKOWSKI, Tomasz. An Influence of Strategic Awareness on Management Control: Evidence from Polish Micro, Small and Medium-sized Enterprises. **Management and Business Administration, Central Europe**, v. 23, n. 1, p. 3-31, 2015. DOI: DOI:10.7206/mba.ce.2084-3356.131.
- FAN, D. **Proof that diversity drives innovation.** 2011. Disponível em: <https://www.diversityinc.com/proof-that-diversity-drives-innovation/>. Acesso em: 3 fev. 2023.
- FIJAŁKOWSKA, Justyna; MACUDA, Malgorzata. Value creation disclosure in CSR reports: evidence from Poland. **Zeszyty Teoretyczne Rachunkowość**, v. 93, n. 149, p. 61-78, 2017.
- FISHER III, William; OBERHOLZER-GEE, Felix. Strategic management of intellectual property: an integrated approach. **California Management Review**, v. 55, n. 4, 2013.
- GLOBAL private and public R&D funding. **Sciencegram UK: Making sense of science spending**, 2013. Available: <http://sciencegram.org/blog/2013/05/science-technology-business->

government-g20/. Access: 6 dec. 2022.

HADI, Nor. Measuring corporate social responsibility performance for employees with an NH approach method. **Jurnal Kajian Ekonomi dan Bisnis Islam**, v. 11, n. 2, p. 243-263, 2018.

HOLLANDER, Jocelyn A. I demand more of people: accountability, interaction, and gender change. **Gender & Society published**, 30 oct. 2012. DOI: 10.1177/0891243212464301.

KAHLE, Jane Butler. Will girls be left behind? gender differences and accountability. **Journal of Research in Science Teaching**, v. 41, n. 10 p. 961-969, 2004.

KAPLAN, Sarah. Gender equality as an innovation challenge. **Insights Hub**, sep. 2017.

KROOK, Mona Lena; TRUE, Jacqui. Rethinking the life cycles of international norms: the united nations and the global promotion of gender equality. **European Journal of International Relations**, London, p. 103-127, 2012. DOI: 10.1177/1354066110380963.

LANGFIELD-SMITH, K. Management control systems and strategy: a critical review. **Accounting, Organisations and Society**, London, v. 22, n. 2, p. 202-232, 1997.

LATOSZEK, Ewa *et al.* **Facing the challenges in the European Union: re-thinking EU education on and research for smart and inclusive growth (EuInteg)**, Warsaw: Polish European Community Studies Association (PECSA), 2015.

LOFTUS, Peter. Pfizer Profit Declines 19% as Sales of Lipitor Slump. **The Wall Street Journal**, 1 may. 2012. Available: <http://www.wsj.com/articles/SB10001424052702304050304577377602021894114>. Access 14 dec. 2022.

MACUDA, M. Corporate social responsibility: a new trend in hospital accounting?. **Semantic Scholar**, 2016.

MACUDA, Małgorzata. Challenges in financial reporting: a tailor-made profit and loss statement for hospitals. **Research gate**, dec. 2015. Available: https://www.researchgate.net/publication/288516258_CHALLENGES_IN_FINANCIAL_REPORTING_A_TAILOR-MADE_PROFIT_AND_LOSS_STATEMENT_FOR_HOSPITALS. Access: 19 mar. 2024.

MARTINS, E. C.; TERBLANCHE, F. Building organisational culture that stimulates creativity and innovation. **European Journal of Innovation Management**, v. 6, n. 1, p. 64-74, 2003. Available: <https://doi.org/10.1108/14601060310456337>. Access: 14 apr. 2023.

MERTON, R. **The sociological of science: theoretical and empirical investigations**. Chicago: The University of Chicago Press, 1967.

MILLAR, G. Employee engagement: a new paradigm. **Human Resource Management International Digest**, v. 20, n. 2, p. 3-5, 2012.

POSKELA, Jarno; MARTINSUO, Miia. Management control and strategic renewal in the front end of innovation. **Journal of Product Innovation Management**, v 26, n. 6, p. 671-684, 2009. DOI: <https://doi.org/10.1111/j.1540-5885.2009.00692.x>.

SCAPENS, Robert W. Understanding management accounting practices: A personal journey. **The British Accounting Review**, v. 38, n. 1, p. 1-30, mar. 2006. DOI: <https://doi.org/10.1016/j.bar.2005.10.002>.

SHAFFER, M. A. Gender discrimination and job-related outcomes: a cross - cultural comparison of working women in the United States and China, Amsterdam. **Journal of Vocational Behaviour**, p. 395-427, 2000.

SWIETLA, Katarzyna. Risk in providing accounting services in the context of new regulations regarding liability insurance (OC) in Poland. **Copernican Journal of Finance and Accounting**, v. 4, n. 1, p. 173-185, 2015. DOI: <https://doi.org/10.12775/CJFA.2015.012>.

UNITED Nations office at Vienna. United Nations office on drugs and crimeun. **Strategy for gender equality and the empowerment of women (2018–2021)**. 2018.

UNTERHULTER, Elaine; NORTH, Amy; WARD, Orlanda. Accountability for gender equality. **Programme and meeting document**, UNESCO, Paris, 2018.

VENKATESH, V.; MORRIS, Michael G. Why don't men ever stop to ask for directions?: gender, social influence, and their role in technology acceptance and usage behaviour. **MIS Quarterly**, Minnesota, v. 24, n. 1, p. 115-139, mar. 2000.

WEBSTER, Jane; WATSON, Richard T. Analyzing the past to prepare for the future: writing a literature review. **MIS Quartely**, Minnesota, v. 26, n. 2, p. 13-23, jun. 2002.

WORLDWIDE revenue of Pfizer's Lipitor from 2003 to 2019. **Statistica portal**, fev. 2020. Available: <https://www.statista.com/statistics/254341/pfizers-worldwide-viagra-revenues-since-2003/>. Access: 6 feb. 2023.

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