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# The Athens Journal of Business & Economics



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## Volume 6, Issue 4, October 2020

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**ATHENS INSTITUTE FOR EDUCATION AND RESEARCH**

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The current issue is the fourth of the sixth volume of the *Athens Journal of Business & Economics (AJBE)*, published by the [Business & Law Division](#) and the [Economics Unit](#) of ATINER.

Gregory T. Papanikos  
President  
ATINER



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## Threats to Auditor Independence: Evidence from Iran

By Ashkan Mirzay Fashami<sup>\*</sup>, Pran Krishansing Boolaky<sup>♦</sup> &  
Kamil Omoteso<sup>‡</sup>

*This paper aims to examine threats to auditor independence in Iran. A mixed questionnaire, including both quantitative closed-ended questions and an open-ended qualitative question, is developed to investigate threats to auditor independence. Moreover, thematic analysis is used to triangulate the results against financial media articles throughout 1994 – 2014. Findings suggest that while bribery, non-audit services, and economic condition are key threats to auditor independence in Iran, gifts and presents do not compromise independence given the Iranian culture. This study contributes to a better understanding of auditor independence in Iran, which may apply to other regional settings. Moreover, it provides some suggestions to improve the current Iranian Audit Organisation's auditor independence framework. (JEL M32)*

**Keywords:** *Audit, Auditor independence, Iran, Iran Audit Organisation, Threats to auditor independence.*

### Introduction

This paper aims to examine threats to auditor independence as identified in the research literature, and it triangulates these threats against the perceptions of professionals in Iran. Iran has experienced considerable business and accounting scandals over the past few decades that led to the gradual emergence of professional standards, including the audit profession (Rezaee & Davani, 2013). Various events, such as the country's engagement in a war with Iraq have prevented the country from conducting audit research (Salehi, Mansouri, & Pirayesh, 2008).

Extant Iranian audit literature is insufficient to determine threats to auditor independence. Salehi, Mansouri, and Azary (2009a) investigate the expectation gap in independence between investors and auditors. Their study suggests a major difference in their perceptions regarding independence. Investors consider internal factors (such as prospects of re-appointment) as severe threats to independence, whereas auditors consider external factors (such as regularity framework and corporate governance) as serious threats (Salehi et al., 2009a). Salehi (2011) suggests that the existence of an audit committee may improve independence. KarbasiYazdi and ChenariYukat (2012) suggest that a long-term relationship

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between auditors and their clients is a major threat to their independence (KarbasiYazdi & ChenariYukat, 2012). Abdoli, Mahmoudzadeh, and Darvishan (2014) show that a mandatory auditor rotation safeguards independence, whereas Eshagniya and Salehi (2017) suggest that even restatement of financial statements of a client company does not lure to a change of its auditor.

This study has documented the Iran Statement of Membership No. 4 report of the International Federation of Accountants (IFAC) in 2009 and 2016. As per the report ([www.ifac.org](http://www.ifac.org)), the code of ethics development and implementation is still on an ongoing stage in Iran until 2017. The Iranian Institute of Certified Public Accountants has translated the IFAC code of ethics for professional accountants and is developing its ethical standards using Iranian laws, regulations, and other local factors. In 2014, The Iranian Audit Organisation (IAO) (also called The Audit Organisation), made changes to professional standards on independence to minimise the risk of auditor compromising independence and continues to exert its regulatory authority on compliance. Since then, there has been no investigation as to the effectiveness of this change. This study aims to provide insights on auditor independence in Iran by answering the following research questions:

What are the potential threats to auditor independence, and how should a regulator prioritise them to enhance auditor independence in Iran?

This study is motivated by four factors. Firstly, there is still a lack of empirical evidence in countries with specific settings like Iran. Iran is an Islamic jurisdiction predominated by Sharia's principles. It is also undergoing political tension(s) within and from outside the country. Beeman (2003) refers to the conflict between Iran and the U.S but much more as a cultural conflict of the post-modern feature. There is also a shortage of qualified accountants, and the government is still struggling to upgrade professional accountancy education to an international standard level. Given this situation, this study argues that there is as such no proper standard on independence that would satisfy not only the needs of the Iranian but also the international stakeholders.

Secondly, this study is also motivated by recent changes in professional standards related to auditor independence in Iran in a bid to increase our understanding of the similarities and differences compared to IFAC code of independence and other threats identified in the literature (Kosmala, 2007; Lee & Stone, 1995; Ramazani & Atani, 2010; Salehi & Husini, 2011). This study is also driven by the mixed, if not, conflicting results in the literature on threats to independence in Iran (MohammadRezaei, Mohd-Saleh, Jaffar, & Hassan, 2016; Salehi, 2009a, 2009b; Salehi et al., 2009a). As advanced by Salehi (2009a), there is yet no clear evidence on auditor independence in Iran.

Lastly, the research memo "Auditing Standards for clients Doing Business with Iran" of the Centre on Sanctions and Illicit Finance (CSIF) draws out attention on risks of auditors compromising independence in Iran. This CSIF discussion memorandum provides an assessment of the responsibilities of an external auditing firm whose clients are doing business with Iran. It covers auditing, disclosure, and reporting. This assessment explains the nature of responsibilities for an external auditing firm and the responsibilities for

strengthening the overall control environment in which trade with Iran is carried out. This assessment is designed to create awareness of the nature of auditor's professional duties concerning Iranian businesses. CSIF's goal is to initiate public discussion, encourage regulatory support, and most importantly, to encourage leading accounting firms to adopt relevant audit practices voluntarily (Dubowitz, 2017).

CSIF identifies Iran as a highly risky business environment. CSIF found that companies doing business with Iran were corrupted and had to incur massive fines. For example, a French oil company, Total S.A., paid \$398 million in fines to U.S. authorities for paying for access to Iran's oil fields; a Norwegian firm paid a \$3.5 million fine to authorities for violating anti-bribery laws; and also been shown to have bribed Iranian officials for drilling rights. Iran ranks 130 out of 168 for corruption by Transparency International, and 6/7 on country risk by the Organisation for Economic Co-operation and Development. This study may contribute to the debate on auditor independence threats by providing insights on a country like Iran with its specificities in terms of religion, culture, regulations, political tension, and efforts of the country to align if not harmonise with the international code of ethics on auditor independence.

Using a survey-based approach through questionnaires, including both closed-ended and open-ended questions, this study empirically investigates perceptions of a sample of forty professionals on auditor independence in Iran. The findings suggest that bribery, non-audit services, and Iran's economic condition are primary threats to independence as opposed to gifts and presents. This finding suggests that gifts can be a business component without compromising auditor independence in Iran.

This paper contributes to the literature in several ways. First, it provides a better understanding of the audit profession in Iran, a non-IFRS country with an Islamic legal system. Due to created opportunities by Islamic laws and non-IFRS background of Iran, this paper provides a lens of observation to auditor independence issue in Iran and beyond. Given the similarities in Iran with other regional nations, the obtained evidence in this study can be instructive to other countries in the Middle East and beyond (Mirshekary & Saudagaran, 2005). Second, given the current attention from the IAO to auditor independence issues, this paper provides an avenue for regulators and decision-makers to take preventive and corrective actions to safeguard auditor independence. Therefore, the capacity to prevent and detect fraud and error increases and financial statements may demonstrate a better picture regarding the financial affairs of companies. Precisely, as the IAO (2014a) recently identified 11 threats to auditor independence, this paper aligns with the IAO's Code through investigation and comparisons of different threats from the scholarly literature. Notably, not all threats in the literature align with the IAO's identified threats, so a variety of participants' perceptions in this paper suggests a lack of clarity regarding auditor independence issues in Iran. Third, this paper educates Iranian users of financial statements about audit profession, increasing their knowledge on how to protect themselves from financial loss.

The rest of this paper is organised as follows. Section 2 provides the institutional background, outlining the legal and financial system of Iran. Section 3 reviews the related literature on auditor independence, whereas section 4 lays out the research design and method. Section 5 reports and interprets the findings, and the paper ends in section 6 with a concluding note.

### *Institutional Background*

Baskerville, Wynn-Williams, Evans, and Gillett (2014, p. 307) state that: “*Ethnicity is critical to a greater or lesser degree depending on the socio-historical backdrop and the array of political systems.*” Ethnicity is a research continuum, beginning with nation-states as a unique culture and moving through to nations with multiple cultures (Baskerville et al., 2014). As such, each country’s culture affects its legal system, which then affects its auditing practices (Ding, Jeanjean, & Stolowy, 2005). Sharia constitutes the Iranian constitution (Wright, 2000) that is fundamental to its systems and practices.

### Religion and Auditing in Iran

This study proceeds on the basis that Iran, as a nation-state, is a monoculture, where Islamic laws dominate its banking and finance system (Ismail & Tohirin, 2010; Rostami, Pakdel, Hasanzadeh Kojou, & Hasanzadeh Kochou, 2016). Islamic revolutionists have supported the notion of a Sharia-based constitution throughout their Islamic movements before and after the Islamic Revolution in 1979 (Arjomand, 2002). Article 4 of the Iranian constitution mentions that Islamic standards (including ethical standards) must govern all laws of the country, and any law which is not based on Islamic principles is null (AoE, 1979). The Guardian Council of the Constitution is responsible for ensuring the consistency of the proposed laws to the constitution and Islamic laws (CIA, 2014).

Islamic principles shape audit practices (including auditor’s code of ethics) of Islamic countries (Kasim, 2010). Sharia prohibits uncertainty, gambling, dealing with forbidden products (such as pornography or pork), monopoly, and misrepresentation (Black & Sadiq, 2011). In an Islamic setting, auditors have to serve the needs of their nation in general, contrary to non-Islamic settings, where auditors are mainly and directly responsible to their shareholders (Ibrahim, Man, & Noor, 2013a), though they have a duty of care for the public interest. Based on Sharia’s principles an auditor should investigate any possible changes in the product’s ingredients or its production formulas (Khan, 1985) an aspect which is not covered in financial statements audit under the Anglo-Saxon principle. Auditors should also examine the extent to which an auditee has practised *Israf*, referring to the existence of extravagance and overspending in the auditee (Khan, 1985). Moreover, auditors should investigate the potential instances of *Khiyanah*, suggesting the existence of treachery, infidelity, or disloyalty and signs of any violation of trust regarding financial matters, honour, power, or position (Ibrahim et al., 2013a). Furthermore, they should determine whether the clients have practised *Tatfif*, i.e. treachery in weights and measures to other parties and their

adherence to Sharia's injunction of *Awful Mikyal Walmizan*, referring to the accuracy of weights and measures of packed materials (Khan, 1985).

### Culture and Auditing in Iran

There is a link between national culture and auditing (Khlif, 2016). Prevailing cultural values affect auditors' judgements (Patel, Harrison, & McKinnon, 2002). Power distance is one of the identified cultural dimensions by Lonner, Berry, and Hofstede (1980). Auditors in countries with a high level of power distance (e.g. Iran) are more likely to forgo their independence (Yamamura, Frakes, Sanders, & Ahn, 1996). When managers practise autocratic leadership, they do not respect the opinions of their subordinates (Javidan & Dastmalchian, 2003). They develop ideas and instruct their employees without considering their views (Javidan & Dastmalchian, 2003). They are highly performance-oriented, though they are not future-oriented (Ding et al., 2005).

Individualism versus collectivism is another important factor (Lonner et al., 1980). Auditors from individualistic cultures better retain their ethical standards regardless of the applied pressure, whereas auditors from collectivist cultures may quickly succumb to their clients' pressure (McKinnon, 1984). Moreover, auditors from countries with a high level of uncertainty avoidance are more careful in their decision-making, and they do not merely focus on audit plans and rules (Hughes, Sander, Higgs, & Cullinan, 2009). Iran is a country with a high level of power distance and a low degree of uncertainty avoidance and individualism (Bochner & Hesketh, 1994). As such, it is likely that Iranian professionals, such as auditors, may be more likely to sacrifice their independence because it is less likely that they will be questioned (Hillmann, 1990).

### Iran Audit Organisation (IAO)

Iran Audit Organisation (IAO) is the primary regulator of the audit profession in Iran (Mirshekary & Saudagaran, 2005). It was established by an act of the Iranian Parliament in 1987. It is affiliated to the Ministry of Economic Affairs and Finance. Its main objectives are to address the needs of government regarding audit and specialised financial services, to set accounting and audit standards in accordance with Sharia, and to fulfil the country's needs regarding accountancy. While considering the Iranian taxation rules and customs, it has modified the Iranian accounting standards based on international standards since 1997. The Accounting Standards Setting Committee of IAO produces the Iranian accounting standards. The committee has nine members. Five of them are from Board of Executive of IAO, two from Iranian Association of Certified Public Accountants, one from Security Exchange Agent Organisation, and one representative from industry (Chatterjee, Mirshekary, Al Farooque, & Safari, 2010).

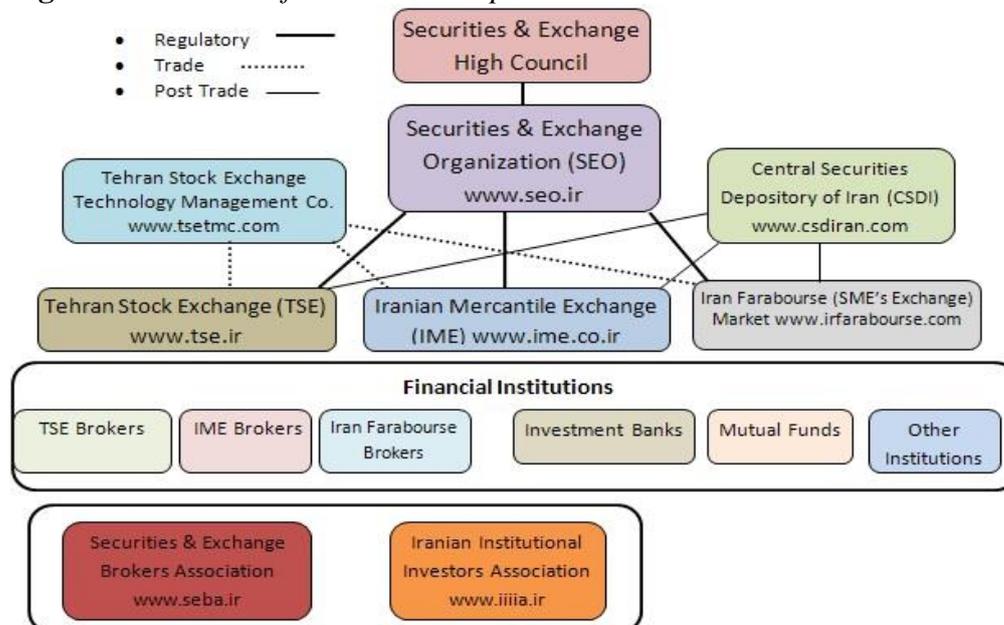
IAO introduced 33 audit guidelines in 1997, which after revision became standards in 1999. It revised some of them in later years (Gholamhossin & Abdolhamid, 2012). The IAO codified and published a revised set of audit standards using the International Accounting Standards (IAS). It released a

comparative table that compares the National Accounting Standards with IAS, and it introduced the national standards that are very similar to IAS (Mirshekary & Saudagaran, 2005). Failure to comply with the principles and criteria for professional competence and care, non-compliance with the provisions of Code of Professional Conduct, and any behaviour against the professional affairs may lead IAO to consider some disciplinary actions (IAO, 2014a). The disciplinary actions can range from compulsory learnings; oral and written warnings; fines, restitution, and completing job through other members at the expense of offender; prevention from the independent professional activities; suspension of membership; to expulsion from the professional bodies for any non-compliance (IAO, 2014a).

### Iranian Capital Market Development and Auditing

Iran recognised the importance of the capital market during the 1930s (Mashayekhi & Mashayekh, 2008). The Stock Exchange Act of the Parliament led to the formation of the Tehran Stock Exchange (TSE) in 1966. TSE officially started its operation on 4 February 1967. After the 1979 Islamic revolution, there were no national accounting standards in place, and many listed companies on TSE obtained a qualified audit report (Tabibi, 1993). In a bid to address this lacking, Iranian government established different audit enterprises such as Budget, Planning, and National Industries Organisation to manage its governmental entities (Moghaddam, Shadmehr, Mousavian, & Minab, 2012). Moreover, the Act of using expert and professional services of certified accountants as official accountants of the Parliament led to the formation of the Society of Certified Accountants of Iran in 1993 (Moghaddam et al., 2012).

**Figure 1.** Structure of the Iranian Capital Market.



Source: <http://tse.ir/cms/Page57.html>.

TSE joined the Federation of Euro-Asian Stock Exchanges in 1995 (TSE, 2006). Moreover, it permitted listed companies to issue corporate bonds in 2003 (TSE, 2006). The new Securities Act enabled the Securities and Exchange Organisation and Securities and Exchange High Council to govern the Iranian capital market in 2005 (TSE, 2005). Iranian government established the National Development Fund based on Article 84 of its Fifth Five-year Socio-Economic Development Plan (2011-2015) in 2011 to use its oil revenues for its future investments (Fashtami, 2014). Figure 1 depicts the Iranian capital market.

### International and Iranian Ethical Standards for Professional Accountants

According to the International Ethics Standards Board for Accountants threats to auditor independence are grouped into five categories (IFAC, 2013), contrary to IAO where they are listed in eleven different situations (IAO, 2014b). Table 1 shows the equivalence of the IAO's list of independence threats with the categories of threats to independence as per the International Ethics Standards Board for Accountants.

**Table 1.** *Equivalence Table: IAO and IFAC – Threats to Auditor Independence*

IAO	IFAC
Family, personal, or financial relationship between auditors and their clients	a & d
Inclusion of auditors in their clients' board of directors, senior officers, or partners	b & c
Provision of non-audit services to clients	a
High management pressure on auditors	e
High audit fees	a
Existence of contingent fees	a & e
Purchasing and accepting gifts and hospitality	a & d
Ownership of audit firms by those other than auditors	e
Presence of former audit partners as clients	b & d
Existence of lawsuits between auditors and their clients	c & e
Long-term association between auditors and their clients	a, b, & d

*Note:* a = self-interest threat, b = self-review threat, c = advocacy threat, d = familiarity threat, and e = intimidation threat.

A review of past studies on audit independence in the Iranian literature reveals gifts and presents, bribery, audit partner tenure, prospects of reappointment, non-existence of an audit committee, and auditors' lack of competence as threats to independence (Abdoli et al., 2014; Dehghan, 2013; Salehi, 2009a, 2011; Salehi & Husini, 2011; Salehi et al., 2009a). Table 2 provides a comparison between identified threats in IFRS countries, Iran, and the international threat framework. The reason(s) for including IFRS countries is that they are more likely to adopt IFAC ethical standards.

**Table 2.** Threats to Auditor Independence: IFRS Countries, Iran, and International Threat Framework

IFRS countries	Reference	Equivalence to the international threat framework	Iran	Reference	Equivalence to the international threat framework
Receiving gifts and presents	Du (2018), Fern (1985)	a & d	Receiving gifts and presents	Salehi (2009a), Salehi et al. (2009a)	a & d
Bribery	Kosmala (2007)	a	Bribery	Dehghan (2013), Ramazani and Atani (2010)	A
Audit partner tenure	Ye, Carson, and Simnett (2006)	a, b, & d	Audit partner tenure	Abdoli et al. (2014), Salehi and Kangarlouei (2010)	a, b, & d
			Prospects of reappointment	Salehi et al. (2009a)	a & b
Non-existence of an audit committee	Gul (1989), Nur Barizah Abu, Abdul Rahim Abdul, and Hafiz Majdi Abdul (2005), Teoh and Lim (1996)	a, c, & d	Non-existence of an audit committee	Salehi (2009a, 2011)	a, c, & d
Auditors' lack of competence	Lee and Stone (1995)	a & e	Auditors' lack of competence	Mansouri, Pirayesh, and Salehi (2009), Salehi and Husini (2011)	a & e

Note: a = self-interest threat, b = self-review threat, c = advocacy threat, d = familiarity threat, and e = intimidation threat.

There are differences between IFRS countries and Iran regarding auditors' legal liabilities (Rostami et al., 2016). In an IFRS country, auditors may lose their licence if they fail to maintain their independence (Beattie, Brandt, & Fearnley, 1999). However, audit firms that breach the regulations of Iranian Association of Certified Public Accountants may face one of the two potential consequences. First, they may incur a penalty from the quality control committee of the

Association (which would not be severe) (Azizkhani, Shailer, & Monroe, 2012). Second, they may lose their licence after an assessment of the peer review audit committee of Securities and Exchange Organisation (which would be rare) (Azizkhani et al., 2012). Given that Iranian law does not consider any civil action against audit firms to recover damages, the risk of litigation is low. As a result, auditors may have more rooms to compromise their independence (Azizkhani et al., 2012).

## Literature Review

### *Auditor Independence: A Global Overview*

Auditor independence is the cornerstone of the audit profession (Du, 2018; Franzel, 2012). Prior research suggests that accounting scandals trigger reforms and new regulations for the profession (Bhasin, 2013; Hilary & Lennox, 2005; Kozloski, Meckfessel, Moehrle, & Williams, 2016; Pai & Tolleson, 2015). In consequence, some have developed their ethical standards, whereas others have fully adopted the IFAC code of ethics (Branson, Chen, & Anderson, 2015). As for now, more than 130 countries have adopted IFAC ethical standards (IFAC, 2018). However, the question of whether it is possible to regulate or mandate auditor independence attracts much attention in mature capital markets such as the United States, the United Kingdom, and Australia (Stevenson, 2002; Umar & Anandarajan, 2004).

Regulatory approaches inevitably seek to mandate auditor independence (DeFond, Raghunandan, & Subramanyam, 2002; Watts & Zimmerman, 1983). For example, they make proposals to prohibit particular conflict of interest situations (Moore, Tetlock, Tanlu, & Bazerman, 2006), including provisions of non-audit services (Craswell, 1999), or impose requirements regarding audit partner rotation (Carey & Simnett, 2006b).

### *Non-audit Services*

International Code of Ethics for Professional Accountants mentions that the provision of non-audit services may result in self-review, self-interest, and advocacy threats (IFAC, 2014a). The Code instructs auditors to evaluate potential threats of non-audit services before any engagement. The auditors should preclude to provide any non-audit services if they are unable to reduce independence threats to an acceptable level (IFAC, 2014a). Non-audit services can compromise auditor independence for two reasons: First, they increase auditors' financial dependency on their clients, reducing their desire to disagree with their clients' requirements. A high amount of non-audit services creates significant revenues for auditors, making it more harmful to lose their clients. High non-audit fees outweigh potential costs of non-audit services (litigation risk and reputation loss), making it worthy to compromise auditor independence (DeFond et al., 2002). Second, managerial role resulted from consultancy nature of non-audit services brings bias

into auditors' judgement, endangering their independence (SEC, 2000). Consultancy services provide private information for auditors, generating them economic rent by decreasing audit costs (Campa & Donnelly, 2016).

Non-audit services are highly associated with independence in appearance. They signal a lack of independence, reducing users' trust in financial statements (Beck, Frecka, & Solomon, 1988b). They increase the likelihood of a self-selection bias (Abdel-Khalik, 1990). Independent auditors are more likely to lose their job as a consequence of their disputes with their clients (Simunic, 1984). High non-audit services impair independence, reducing auditors' desire to dispute with their clients. This increases auditors' tenure with their clients (Beck, Frecka, & Solomon, 1988a). It reduces the likelihood of a qualified audit opinion's issuance. It encourages auditors to maintain their relationship with their clients to continue receiving their income, regardless of potential harms to their independence (Hay, Knechel, & Li, 2006a). However, Iranian literature does not consider non-audit services as threats to auditor independence. This suggests differences between Iranian and international audit environments, motivating this study to identify independence threats in Iran.

#### *Audit Firm & Audit Partner Tenure*

Audit firm tenure refers to the length of time an audit firm works for a client, whereas audit partner tenure refers to the length of time a partner of the audit firm conducts the audits of its client (Chen, Lin, & Lin, 2008). Many countries such as Argentina, Australia, Belgium, China, Denmark, France, Germany, Hong Kong, Mexico, Netherlands, New Zealand, Norway, Russia, Taiwan, the UK, and the U.S. limit their audit partner tenure (Lennox, Wu, & Zhang, 2014). For example, the U.S. and the UK require audit partner rotation and a cooling-off period of every five years (APB, 2009; SEC, 2002, 2003). Moreover, China requires audit partner rotation of every five years with a two-year cooling-off period (Lennox et al., 2014), whereas Taiwan requires rotation of every five years with no cooling-off period (Chi, Huang, Liao, & Xie, 2009). However, they do not require mandatory rotation of audit firms (Lennox et al., 2014).

Nevertheless, six countries (Brazil, India, Italy, Singapore, South Korea, and Turkey) have a legal requirement to rotate their audit firms after a maximum specified period (Bleibtreu & Stefani, 2013; Liang, 2015). For example, South Korea has mandated audit firm rotation every seven years since 2006 (Kwon, Lim, & Simnett, 2010). Moreover, the European Union has recently mandated rotation of audit firms (European Parliament, 2014). The Australian Securities and Investment Commission's Chairman mentions that they have noticed a 30% rise in audit failures of listed companies in 2012 (Durkin & King, 2012). The Chairman warns that a mandatory audit firm rotation would be proposed to the Australian government if they detect any further rise in audit failures (Jenkins & Vermeer, 2013).

*Audit Partner Tenure: Pros & Cons*

International Code of Ethics for Professional Accountants mentions that a long-term relationship between auditors and their clients may lead to familiarity and self-interest threats (IFAC, 2014a). The Code mentions that an auditor should not remain a key partner of a company for more than seven years. The auditor should not participate in audit-related activities, provide consultation services, or influence outcomes of engagement for a minimum period of two years after completion of its seven years engagement period (IFAC, 2014a). Similarly, term 21.17 of the Iran Audit Organisation's Code of Professional Conduct mentions that a long-term relationship between auditors and their clients may threaten auditor independence. In such circumstances, auditors shall take the necessary measures to safeguard their independence (IAO, 2014a). Paragraph 2 of clause 10 of Tehran Stock Exchange requirements obliges all public listed companies to rotate their audit partners every four years (Abdoli et al., 2014). This requirement does not permit the listed companies to reassign their former audit partners in future (Abdoli et al., 2014).

A long-term relationship encourages auditors to readily accept their auditee's accounting and reporting choices (Chen et al., 2008). A long-term tenure creates a personal relationship between auditors and their clients (Chen et al., 2008). It compromises auditors' objectivity because direct and indirect management's pressures affect their attitude over time (Carey & Simnett, 2006a). Auditors' bias influences their behaviour during the audit and reporting process, wherein in case of a conflict of interest auditors favour their clients (Dopuch, King, & Schwartz, 2003). A long-term tenure increases familiarity threat, limiting the number of effective audit-testing methods. It routinises an audit plan, reducing auditors' desire to use creativity in their audit procedures (Arrunada & Paz-Ares, 1997). Moreover, it reduces auditors' desire to issue a qualified audit opinion, reducing the quality of their services (DeFond et al., 2002).

However, a long-term relationship between auditors and their clients can also be beneficial, as it increases auditors' knowledge regarding their clients' operations and systems (Petty & Cuganesan, 1996). Auditors should conduct various substandard audits on their new clients to gain enough knowledge regarding their operation (Berton, 1991). They may not detect irregularities during their initial engagement years because of their lack of familiarity, reducing audit quality (Petty & Cuganesan, 1996). Auditors do not have sufficient knowledge to establish relevant quality controls to detect irregularities in initial stages. They need to have enough time to familiarise themselves with their clients' audit methodology and databases (Carey & Simnett, 2006a). Moreover, they face a higher litigation risk in the initial stages of their audit because of their lack of knowledge about their clients' specific risks (Palmrose, 1989).

Client-specific knowledge is essential for auditors' work, though other types of knowledge such as general and industry knowledge help auditors to complete their tasks (Knapp, 1991). Auditors may not detect material misstatements during the initial years of their engagements, due to their lack of client-specific knowledge (Beck et al., 1988b). Lack of client-specific knowledge may cause

auditors to readily accept their clients' explanations (Kinney Jr & McDaniel, 1996). Auditors' extra efforts cannot mitigate their lack of knowledge about their client-specific threats. Therefore, the likelihood of fraudulent financial reporting is higher during the initial years of engagement (Carcello & Nagy, 2004). However, long-term tenure leads to less extreme income-increasing and income-decreasing accruals, restricting earnings management (Myers, Myers, & Omer, 2003).

#### *The Scope of Audit Report According to Sharia*

Islam has banned any risky or hazardous sale because it may lead to an argument among the related parties (Khan, 2011). Based on Sharia, auditors should report particular transactions. For example, they should determine whether a client has engaged in the sale of al-gharar, meaning the sale of a product which is not present, or its consequence is unknown (Ibrahim, Man, & Noor, 2013b). Moreover, they should discover the extent to which a client has practised Israf, meaning the existence of extravagance in an auditee. The governments determine the adequate level of expenditures, helping auditors to discover Israf (Khan, 1985). Furthermore, auditors should report to what extent their clients have practised Bakhs, meaning voluntary attempts to reduce the value of a product before its sale. Thus, auditors should investigate any possible change in a product's ingredients or its production formulas (Khan, 1985). Further, they should investigate potential instances of Khiyanah, meaning the existence of treachery, infidelity, or disloyalty. They should look for signals of any violation of trust regarding financial matters, honour, power, or position (Ibrahim et al., 2013b).

Based on Sharia, auditors should determine any Tatif practised by their clients, meaning harms in weights and measures caused to other parties. They should measure their client's adherence to Sharia's injunction of Awful Mikyal Walmizan, meaning the accuracy of weights and measures of packed materials (Khan, 1985). Moreover, auditors should investigate their auditee's compliance with Uqud, meaning the fulfilment of its contracts. They should search for the areas where an auditee has failed to meet its contractual obligations and report them (Khan, 1985). Furthermore, they should determine if there is any indication of dishonesty, fraud, or deceit in an auditee. They should consider a broad range, from embezzlement and misappropriation to trade secrets or intellectual property to conflict of interest or commitment (Ibrahim et al., 2013b). Khan (2011) states that falsehood damages producers, traders, and customers. Auditors should determine the existence of any falsehood or breach of pact or promise in their client's organisation and report them (Ibrahim et al., 2013b).

#### *Audit-related studies in Iran*

Existing audit-related literature is insufficient to understand the audit market and auditor independence in Iran. Expectation gap between auditors and investors is investigated by Salehi, Mansoury, and Azary (2009b). The results suggest that there is a major difference between auditors and investors' perception regarding the actual level of auditor independence. Investors consider internal factors (i.e.

prospects of reappointment) as serious threats, whereas auditors consider external factors (i.e. regularity framework and corporate governance) as serious threats to independence. There is a significant difference between auditors and investors' perceptions of gifts and presents. Perceptions regarding prospects of reappointment are considerably different too (Salehi et al., 2009b). Salehi et al. (2009b) suggest at least some common grounds in perceptions between auditors and investors regarding the expected level of auditor independence, albeit at different levels. Both groups consider gifts and presents and prospects of reappointment as threats to auditor independence (Salehi et al., 2009b).

The effects of a long-term relationship between auditors and their clients on auditor independence are investigated by KarbasiYazdi and ChenariYukat (2012). Their study finds this relationship a major threat to independence. The long-term relationship encourages auditors to incorporate their clients' requests, preventing them from working objectively. In contrast, a mandatory rotation increases auditors' resistance against management pressure (KarbasiYazdi & ChenariYukat, 2012). The effects of two influential factors (audit firm size and auditor's report) in audit partner rotation's decisions are investigated by Abdoli et al. (2014) in another Iranian study. Their study shows that concerned factors do not affect rotation decisions. Their study emphasises on the importance of rotation to maintain auditor independence.

Prior research regarding audit committees of Iranian companies emphasises on their role. For example, Salehi and Abedini (2008) find that the existence of an audit committee improves auditor independence. Salehi and Azary (2008) suggest that audit committees ensure the objectivity of financial reporting. Salehi and Nanjegowda (2006) find that audit committees contribute to decision makings regarding auditors' selection, retention, and dismissal. Although the importance of audit committees is acknowledged by prior studies, they do not play an important role in Iranian companies (Salehi, 2011). The barriers to an effective audit committee are investigated by Salehi (2011). Salehi finds that individualism among Iranian audit practitioners, centralisation trend of Iranian managers, and lack of an effective legal force are major causes of audit committees' ineffectiveness (Salehi, 2011).

### Auditor Independence in Iran

#### *Gifts and Presents*

Social networking is an essential part of modern businesses (Taormina & Kin-Mei Lao, 2007). Business people may be unable to pursue their objectives alone and use gifts to achieve them (Law, 2010). Gifts and presents are acceptable in some business cultures, such as Chinese (Hwang & Staley, 2005). They are a sign of respect in China (Levy, 1995). Similarly, Iran has deeply embedded traditions regarding gifts. The former king of Iran, Fath Ali Shah, sent his portraits abroad as gifts to show Persian royal power (Anonymous, 2011). Another king, Shah Muhammad Khudabanda, sent 34 camels piled high with treasure to the former Turkish king, Ottoman Sultan Selim II, as a sign of respect in 1567. Large animals

such as horses and elephants were used to express respect, the award rendered services, or celebrate annual events like the New Year throughout the 16<sup>th</sup> and 17<sup>th</sup> century (Ybarra, 2011). Formal gifts are widely accepted in Iran. Some occasions require particular gifts. These gifts merely symbolise existing relationships (Betteridge, 1985).

However, according to term 21.13 of Iran Audit Organisation's Code of Professional Conduct purchase of goods or services with specific conditions, acceptance of irrelevant gifts, and receiving more than a reasonable amount of gifts are serious threats to auditor independence. Term 15.2.E states that auditors must refrain from accepting or giving gifts that may reasonably lead to a belief that their professional judgement or those who deal with them is affected. Unusual gifts can vary based on the circumstances. However, overall, auditors shall abstain from being placed in situations that damage their professional reputation (IAO, 2014a).

Gifts may result in illegal payments, corruption, and bribery (Snell, 1999). They increase the likelihood of violating laws, auditing standards, and codes of professional conduct (Hwang & Staley, 2005). They lead to hidden trades, power dependence, and bureaucratic privileges (Fan, 2002). Gifts damage fiduciary duties of auditors, benefiting them at others' costs (Dunfee & Warren, 2001). Prior research suggests that offering presents affect perceived independence, wherein even small gifts are threats to independence (Du, 2018; Fern, 1985; Pany & Reckers, 1980). Moreover, gifts lead to a bias in auditors' decisions and prevent them from precisely checking areas of concern (Fern, 1985). They negatively affect auditors' judgments in a conflict of interest situation, leading to unethical behaviours (Au & Wong, 2000). Ethical auditors actively avoid any unethical behaviour, including the acceptance of gifts (Fern, 1985). They exercise their duties while preventing any potential threat to their independence (Au & Wong, 2000).

### *Bribery*

Bribery is to encourage someone to do something illegal or influence its sense of justice, due process, and discretion in favour of the giver through provision or promise of something instead (Arowosaiye, 2008). It is a significant threat for today's business, remaining a primary concern for various organisations. It may happen in any department at any level. It affects the overall effectiveness of a market on top of its processes and individuals. Bribers prioritise their interests over others, damaging trust between business partners and destabilising lawfulness of social institutions (Turow, 1985). The public in any country do not accept bribery and request their authorities to combat against fraud.

Article 49 of the Iranian Constitution (Confiscation) mentions that the government is responsible for confiscating all wealth accumulated through bribery and restoring it to its legitimate owner. If no owner can be identified, the wealth must be entrusted to the public treasury (Assembly of Experts, 1979). This rule must be executed by the government with due care, after investigation and provision of necessary evidence under Islamic laws (Assembly of Experts, 1979).

Moreover, term 6 of the Iranian Institute of Certified Accountants' Code of Professional Conduct mentions that as moral characteristics of auditors are the most important part of their profession, the audit principles should satisfy them (IICA, 1985).

Bribery affects auditors' role for several reasons. First, it encourages auditors to increase their efforts or fees to prevent potential future litigations or reputation losses (Simunic, 1984). Second, it lessens the credibility of faulty companies, reducing their share values (Smith, Stettler, & Beedles, 1984). It leads to price and volume variability (Lyon & Maher, 2005). Third, management's turnover as a consequence of loss of reputation, costs of avoiding any potential investment in highly corrupted settings, costs to build an adequate internal control infrastructure to deter bribery, and costs of hiring external bodies to investigate fraud are additional costs associated with bribery (Lyon & Maher, 2005).

#### *Audit Partner Tenure*

A long-term tenure creates a certain level of confidence regarding auditees' financial statements, reducing auditors' desire to check financial reports effectively (Shockley, 1981). The likelihood that auditors issue a going-concern opinion for a client that is close to insolvency increases, as their relationship period increases (Geiger & Raghunandan, 2002). Similarly, Copley and Doucet (1993) suggest a negative association between audit partner tenure and audit quality. A long-term relationship increases auditors' reliance on internal audit reports, discouraging them from using rigorous audit procedures (Arrunada & Paz-Ares, 1997). Auditors may tend to predict the outcomes before the conduct of an audit, reducing the likelihood of discovering mistakes and errors (Arrunada & Paz-Ares, 1997). Limitation of auditors' future income because of a mandatory rotation helps them to maintain their audit quality throughout their auditors' engagement period (Johnson, Khurana, & Reynolds, 2002).

A prolonged tenure discourages audit firms to compete against each other (Carrera, Gómez-Aguilar, Humphrey, & Ruiz-Barbadillo, 2007). Moreover, it limits the scope of auditors, preventing them from becoming familiar with other industries. Auditors do not attempt to update their knowledge and skill to respond to current requirements of their audit market, reducing the likelihood of the audit market improvement (Carrera et al., 2007). Therefore, audit quality declines and potential investors lose their confidence in the market (Craswell, Stokes, & Laughton, 2002). Ye et al. (2006) find that audit partner tenure is the most critical threat to auditor independence. Similarly, Copley and Doucet (1993) show a negative relationship between audit partner tenure and audit quality in government audits.

#### *Prospects of Reappointment*

The term 8.7 of Iranian Institute of Certified Accountants' Code of Professional Conduct states that an auditor shall not accept another auditor's work unless the other auditor's right to practice is officially revoked or professional

reasons regarding non-acceptance of a job by the other auditor are not mentioned. The auditor shall request the name of the former auditor from their client company in writing upon receipt of a new job offer and in case the former auditor is confirmed or with permission of client company contact the former auditor via registered post and investigate any likely professional reasons. In case of the existence of professional reasons or refusal of the client company to permit to contact, the auditor is banned from accepting the job offer (IICA, 1985).

A desire for reappointment influences audit firms' behaviours, wherein they may sacrifice their loss of reputation and litigation risks to continue receiving their audit fees (Raghunathan, Lewis, & Evans III, 1994). Expected future fees increase auditors' dependency on their clients (Gietzmann & Sen, 2002). They may have a greater tendency to collude with their auditees to maintain their position (Gietzmann & Sen, 2002). They may surrender to their clients' desire to obtain non-audit services in their next engagement (Raghunathan et al., 1994). Moreover, a desire for reappointment may encourage auditors to engage in low-balling to offset their initial loss by gaining in subsequent periods (Simon & Francis, 1988).

Some companies voluntarily permit their shareholders to vote regarding their auditors' reappointment (Krishnan & Ye, 2005). Shareholders are often more dissatisfied with their auditors than what their votes suggest (Sainty, Taylor, & Williams, 2002). Auditors' desire to succumb to their clients' aggressive accounting techniques decreases as outside investors exercise control over their selection (Moore et al., 2006). Some factors may affect shareholders' votes regarding their auditors' reappointment. For example, auditors that have a long-term tenure (Dao, Mishra, & Raghunandan, 2008), provide non-audit services (Raghunandan, 2003), and issue a going-concern opinion (Sainty et al., 2002) are more likely to receive a negative vote from their shareholders.

#### *Non-existence of an Audit Committee*

TSE's requirements state that the purpose of audit committees' formation is to help boards of directors regarding their supervisory responsibility to obtain reasonable confidence regarding effectiveness of governance processes, risk management, and internal controls; financial reporting health; internal audits effectiveness; independent auditors independence and independent audits effectiveness; and observance of rules, provisions, and requirements (TSE, 2013).

Prior research suggests that an audit committee plays an essential role in safeguarding auditor independence (Gold, Klynsmitt, Wallage, & Wright, 2014; He, Pittman, Rui, & Wu, 2017; Nur Barizah Abu et al., 2005; Soliman & Ragab, 2014). For example, Nur Barizah Abu et al. (2005) examine factors that may influence auditor independence from commercial loan officers' perspectives in Malaysian-owned commercial banks. They find that the non-existence of an audit committee poses a threat to objectivity (Nur Barizah Abu et al., 2005). An audit committee's principal duty is to monitor the financial reporting processes of its company (Nelson, Elliott, & Tarpley, 2000). Committee members frequently meet with external auditors and financial managers to monitor financial statements, audit processes, and internal accounting controls of the company (Nelson et al.,

2000). Their expertise reduces the likelihood of financial restatements because they better understand the internal audit system and governance structure of their company (Raghunandan, Rama, & Read, 2001).

An audit committee works as an arbiter between a company's management and its audit firm to create a fair and precise report (Klein, 2002). It may intervene on different matters, such as management judgements, accounting estimates and audit adjustments, disagreements between management and auditors, and transactions between the company and its officers or employees (Klein, 2002). It frequently meets with financial managers and auditors to monitor its company's audit process (Carcello & Neal, 2003). It may prevent an auditor's dismissal in case of a disagreement with management (Carcello & Neal, 2003). An independent audit committee encourages auditors to prioritise the interests of shareholders and express the realities (Levine & Kornish, 2000). Independent members reduce the necessity of a legal intervention to protect shareholders (Levine & Kornish, 2000). However, prior social and professional ties such as prior employment between audit committee members and management increase management's ability to influence the committee's decisions (Westphal & Stern, 2006).

#### *Auditors' Lack of Competence*

The term 11.C of Iran Audit Organisation's Code of Professional Conduct states that auditors shall perform their duties with accuracy, competence, and perseverance. They shall consistently maintain their professional knowledge and skill at a level, wherein confidence can be obtained that their services are acceptable and offered according to the latest developments in profession, rules, and regulations (IAO, 2014a). The term 22 states that auditors shall refrain from accepting the professional services that they do not have the competence to perform. The term allows auditors to use expert services while accepting a job if they need them to perform some of their professional services (IAO, 2014a).

Competence and independence are two mutually inclusive characteristics of an audit, wherein independence is unachievable unless auditors have the required competence (Barnes & Huan, 1993). Lee and Stone (1995) investigate the relation between auditor competence and independence. Their findings suggest that assuming no other conflicting interests, a greater probability of competence leads to a higher chance of independence (Lee & Stone, 1995). Alternatively, assuming no other conflicting interests, a greater probability of incompetence results in a higher likelihood of dependence (Lee & Stone, 1995). Lee and Stone find competence as a prerequisite for independence. That is, independence is possible if an auditor is competent and able to satisfactorily complete the designated audit tasks (Lee & Stone, 1995).

Auditors should have enough training and knowledge regarding legal and contractual terms and also the ability to apply professional reasoning. Auditors' proficiency reduces audit risk, as sufficient knowledge about a client company and its environment helps auditors in their client's acceptance decisions (Hayes & Schilder, 2005). Technical knowledge of auditors enables them to detect a company's aggressive accounting practices, providing an opportunity to provide

their reports reasonably (Beattie, Fearnley, & Brandt, 2004). Auditors' competency enables them to identify misleading prospectuses, protecting the potential investors' funds. Moreover, it helps auditors to evaluate the management control systems and their cost policies (Hayes & Schilder, 2005).

Competent auditors can detect and prevent fraud (Hayes & Schilder, 2005). Moreover, they can assess a company's success to achieve its goals (Johnsen, Robertsen, & Åsland, 2004). They can respond to complex situations, enabling them to produce a credible audit report without any reliance on internal reports (Mironiuc, Chersan, & Robu, 2013). Auditors often rely on prior year's risk assessments to plan a new assessment, wherein difficult tasks encourage more reliance on prior works (Monroe & Ng, 2000). Auditors' incompetence increases the likelihood of a failure, because prior years' results may not apply to the current year. Incompetent auditors do not critically evaluate outcomes of risk assessments because of their lack of understanding regarding them (Bagranoff & Venzryk, 2000).

## **Research Design**

This study uses a questionnaire survey-based to conduct this research similar to past studies on related topics (Singh, 2008). Prior Iranian audit-related studies use questionnaires to collect data from their participants (Abdoli et al., 2014; Saeidi, 2012; Salehi, 2011; Salehi & Husini, 2011; Salehi et al., 2009a). In order to assist in quantifying the responses from the survey, this study has used a five-level Likert scale to examine the six identified threats (as discussed in Section 3) to auditor independence. Because close-ended questions cannot capture all responses, this study has further used an open-ended question to allow participants to nominate other threats (Abdoli et al., 2014; Saeidi, 2012; Salehi, 2011; Salehi & Husini, 2011).

### *Questionnaire*

#### Structure and Contents

The questionnaire is divided into three sections. Section I: Demographic information, Section II: Experience and perception regarding threats to auditor independence, and Section III: Additional comments on threats to auditor independence in Iran. The first section contains five questions and asks participants to discuss their demographic information. The second part contains five questions and requires participants to rank the importance of the six identified threats from the previous literature based on their experience and opinion about them. The last section, in an open-ended question, asks participants to nominate other threats to auditor independence in Iran based on their personal views. A copy of the questionnaire is given in Appendix 1.

### Administration

A pilot study was conducted on two accounting academics and an academic ethical adviser to assess the understandability and simplicity of the questions in the questionnaire. The questionnaire was then revised according to their suggestions. As participants had to answer some questions regarding their professional life experience, they may have felt more comfortable with a self-administered questionnaire than other methods that require direct contact with a researcher. The self-administered questionnaire ensured their privacy and provided them with sufficient time to analyse the questions and provide their desired responses (Gregg, 2008). It prevented the researcher's influence over participants, reducing bias in this study (Babbie, 2007).

The questionnaire was administered in English as this study targeted professionals. The authors appointed an agent to distribute the questionnaires in Tehran because the distance was a problem. There are acknowledged difficulties in administering a questionnaire in a jurisdiction outside of a researcher's location. The agent made a phone call to the identified audit firms with a brief overview of the research and asked them whether they are willing to participate. If audit firms showed their willingness to participate, the agent distributed the questionnaires among participants at their preferred time. However, if participants needed to have some time to respond to this query, the agent asked for an appropriate time to call them back. If participants were unwilling to participate the agent apologised them for the disturbance. The agent mailed the obtained responses to authors after the data collection.

### Sample

The working professionals of audit firms in Tehran are chosen as relevant participants for this study. The working accounting and audit professionals in Tehran are suitable participants because of their familiarity with audit processes and financial reporting in Iran. Following Best, Buckby, and Tan (2001), professionals are identified using Yellow Pages. The sample consists of 183 audit firms operating in Tehran. There was no coercion to participate in the study. The participants could answer as much or as little as they prefer. They showed their consent through submission of the questionnaire. This study obtains the responses of 40 participants, representing a response rate of 22%, which is suitable to draw an acceptable statistical conclusion (Baruch & Holtom, 2008).

### *Reliability and Validity of the Questionnaire*

This study conducts a multivariate analysis of variance to determine the effects of participants' demographic characteristics on their perceptions regarding identified threats to auditor independence. Therefore, this study considers four different aspects of the participants' demographic information, as described in section I of the questionnaire.

Qualification level of participants is grouped into the diploma, bachelor, master, and PhD. They are coded from 1 to 4, respectively. Professional accounting qualification levels of participants are coded '0' (without any professional qualification) and '1' (with a professional qualification). The accounting experience level of participants are categorised between 1-3 years (coded as 1), 4-6 years (coded as 2), 7-9 years (coded as 3), and over ten years (coded as 4). Similarly, the occupational experience level of participants is categorised between 1-3 years (coded as 1), 4-6 years (coded as 2), 7-9 years (coded as 3), and over ten years (coded as 4).

Guttman's lambda-2 is a better method than Cronbach's alpha to measure the reliability of a questionnaire (Osburn, 2000; Sijtsma, 2009). Thus, following previous research (López et al., 2013; Menold, Kaczmirek, Lenzner, & Neusar, 2014; Tan, Hemmelgarn, Baumgardner, & Tucker, 2017; Van der Ark, Van der Palm, & Sijtsma, 2011), this study computes Guttman's lambda-2 to determine the reliability of its questionnaire. Guttman's lambda-2 is 0.60, which is acceptable (Callender & Osburn, 1979). Moreover, following Aghaei and Ranjbar (2016) and Sudalaimuthu and Jesintha (2011), this study uses a Kaiser-Meyer-Olkin measure of sampling adequacy to assess the validity of its questionnaire. The test yields the value of 0.571, which is above the acceptable value of 0.5 (Kaiser, 1974).

Because all samples are of equal size, the assumption of homogeneity of covariances across groups is not violated. This study, therefore, uses Wilks' lambda test (Leech, Barrett, & Morgan, 2012). Moreover, it checks the bivariate scatterplots for multivariate normality (Korkmaz, Goksuluk, & Zararsiz, 2014). This study considers the outcomes of the Levene's test for equality of variances to determine whether or not homogeneity of variances for different threats is violated (Gastwirth, Gel, & Miao, 2009). Table 3 shows the outcomes of Levene's test.

**Table 3.** *Levene's test for Equality of Variances for Threats to Auditor Independence in Iran*

Threats to Auditor Independence	F	df1	df2	Sig
Perceptions regarding gifts and presents	1.90	29	8	0.17
Perceptions regarding bribery	3.75	29	8	0.03
Perceptions regarding long-term relationship	0.88	29	8	0.63
Perceptions regarding the prospects of reappointment	2.10	29	8	0.14
Perceptions regarding non-existence of an audit committee	1.40	29	8	0.32
Perceptions regarding auditors' lack of competence	2.05	29	8	0.15

Perceptions regarding bribery is significant at 5% ( $p = 0.03$ ). Thus, the assumption of homogeneity of variances for bribery is violated (Ho, 2013). This study addresses this matter by transforming this variable to equalise the variances (Leech et al., 2012). It analyses the effects of participants' demographic characteristics on their perceptions regarding different threats. Table 4 presents the results

**Table 4.** Wilks' lambda Test to Determine the Effects of Participants' Demographic Characteristics on their Perceptions Regarding Threats to Auditor Independence

Variable	Value	<i>F</i>	<i>Sig</i>	Partial Eta Squared
Intercept	0.00	135.18 <sup>a</sup>	0.00	1.00
EduQualification <sup>b</sup>	0.09	0.66	0.79	0.55
ProQualification <sup>c</sup>	0.58	0.37 <sup>a</sup>	0.86	0.42
AccExperience <sup>d</sup>	0.03	0.89	0.61	0.60
Occupation <sup>e</sup>	0.10	1.10 <sup>a</sup>	0.48	0.69

a. Exact statistic, b. Educational qualification level of participants, c. Professional accounting qualification level of participants, d. Accounting experience level of participants, and e. Occupational experience level of participants.

Wilks' lambda test shows the results of the demographic variables and none is significant. Educational qualification level of participants obtains Wilks'  $\Lambda = 0.09$ ,  $p = 0.79$ , and multivariate  $\eta^2 = 0.55$ . Professional accounting qualification level of participants has Wilks'  $\Lambda = 0.58$ ,  $p = 0.86$ , and multivariate  $\eta^2 = 0.42$ . Accounting experience level of participants obtains Wilks'  $\Lambda = 0.03$ ,  $p = 0.61$ , and multivariate  $\eta^2 = 0.60$ . Lastly, occupational experience level of participants has Wilks'  $\Lambda = 0.10$ ,  $p = 0.48$ , and multivariate  $\eta^2 = 0.69$ . This finding implies that participants' demographic characteristics do not affect their perceptions regarding threats to independence.

#### Data Analysis

First, this study assesses the quantitative results of the closed-ended questions in five forms of Likert scale measures. It compares the figures against each other to determine relative priorities for the Iranian regulator. Following Best et al. (2001), this study compares the mean differences between different threats to determine the participants' relative perceptions.

Second, this study uses open and axial coding to analyse the responses to the open-ended question. It conducts a detailed analysis of participants' responses to discover their views regarding their nominated threats. It categorises the nominated threats and assesses the relationships between different categories and their sub-categories (Wicks, 2010). Moreover, it investigates the missing relationships by searching for potential relationships among different classes (Wicks, 2010). The open-ended question provides the most commonly cited threats by participants. This study uses NVivo to analyse the written responses (Dogui, Boiral, & Heras-Saizarbitoria, 2014; Dowling & Leech, 2014). It identifies six primary themes (higher level coding) and ten categories (lower level coding).

This study analyses the collected data from financial media as follows. It compares triangulated thematic (financial corruption, financial scandal, audit failure, and accounting scandal) analysis of articles against the quantitative results in the first stage. It uses the following keywords to obtain the required information: "financial corruption, Iran"; "financial scandal, Iran"; "audit failure, Iran"; and "accounting scandal, Iran." The search terms are subjective in the sense that the evidence of accounting and reporting failures is necessary to observe the "worst case" scenario facing the Iranian financial and capital market. This study conducts

a general search of Google and Persian news sites (such as Tabnak) to obtain the media articles. It selects reputable media sources with a given emphasis to British Broadcasting Corporation (BBC), Tribune Content Agency LLC, and Financial Times Limited. It disregards the articles that come from sources where reliability may be a concern.

## Results

### *Analysis of Participants' Responses to Likert Scale Questions*

Participants have various qualification levels. Twelve and a half percent have a high-school diploma, 37.5% a bachelor's degree, 32.5% a master's degree, and 17.5% have a doctoral degree. Seventy-two and a half percent do not have any professional accounting qualification. However, 5%, 7.5%, and 15% of participants are a member of Iranian Accounting Association, Iranian Institute of Certified Accountants, and the Iranian Association of Certified Public Accountants, respectively. Two participants did not mention their accounting experience level. One is without any experience, 22.5% with 1 to 3 years of experience, 7.5% with 4 to 6 years, 35% with 7 to 9 years, and 27.5% with over ten years of experience. Twenty percent are accountants, 35% auditors, 5% consultants, and 40% are other professionals. Table 5 provides the participants' demographic information.

**Table 5.** *Demographic Information of Participants of this Study*

Statements	Number of Participants
Qualification level	
High-school diploma	5
Bachelor	15
Master	13
PhD	7
Professional accounting qualification	
No	29
Iranian Accounting Association	2
Iranian Association of Certified Public Accountants	6
Iranian Institute of Certified Accountants	3
Accounting experience	
No	1
1 - 3 years	9
4 - 6 years	3
7 - 9 years	14
Over ten years	11
Current occupation	
Accountants	8
Auditors	14
Consultants	2
Other professionals	16

Table 6 describes the participants' responses to Likert scale questions.

**Table 6.** *Participants' Responses to Likert Scale Questions Regarding the Six Identified Threats to Auditor Independence in Iran*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Gifts and presents	9 (22.5%)	14 (35%)	3 (7.5%)	7 (17.5%)	7 (17.5%)	40 (100%)
Bribery	1 (2.5%)	2 (5%)	2 (5%)	19 (47.5%)	16 (40%)	40 (100%)
Long-term relationship	0 (0%)	8 (20%)	9 (22.5%)	19 (47.5%)	4 (10%)	40 (100%)
Prospects of reappointment	2 (5%)	5 (12.5%)	7 (17.5%)	20 (50%)	6 (15%)	40 (100%)
Non-existence of an audit committee	1 (2.5%)	3 (7.5%)	15 (37.5%)	18 (45%)	3 (7.5%)	40 (100%)
Auditors' lack of competence	3 (7.5%)	11 (27.5%)	7 (17.5%)	12 (30%)	7 (17.5%)	40 (100%)

Following previous research (Bell, Causholli, & Knechel, 2015; Best et al., 2001; Earley & Kelly, 2004; Horvat & Lipičnik, 2016), this study compares mean differences between different threats to determine the participants' perceptions about them. All threats, except gifts and presents, and auditors' lack of competence, are statistically significant at 1%. Bribery obtains the highest mean (4.18), followed by prospects of reappointment (3.58). Long-term relationship and non-existence of an audit committee have an identical mean of 3.48, followed by auditors' lack of competence at 3.23. Gifts and presents obtain the lowest mean (2.73). Therefore, participants consider bribery as the strongest threat to auditor independence in Iran. The prospects of reappointment are the second most important threat. Long-term relationship and non-existence of an audit committee are equally the next important threats. The consideration of a long-term relationship between auditors and their clients and non-existence of an audit committee as threats to auditor independence is consistent with prior international studies as it was discussed in the literature review section. Gifts and presents, and auditors' lack of competence are not statistically significant threats to independence. Table 7 shows the participants' perceptions of different threats.

**Table 7.** *T-test of Participants' Perceptions Regarding the Identified Threats to Auditor Independence in Iran*

Threats to Auditor Independence	N	Mean	SD	Mean Difference	t	p-value
Gifts and presents	40	2.73	1.45	-0.27	-1.20	0.238
Bribery	40	4.18	0.93	1.18	7.99	0.000
Long-term relationship	40	3.48	0.93	0.48	3.22	0.003
Prospects of reappointment	40	3.58	1.06	0.58	3.43	0.001
Non-existence of an audit committee	40	3.48	0.85	0.48	3.55	0.001
Auditors' lack of competence	40	3.23	1.25	0.23	1.14	0.262

N = Number of observations

### Bribery

Transparency International's "Corruption Perceptions Index" scores Iran at 27/100. The scores range from 0 to 100, where 100 is "very clean". Transparency International ranks Iran at the 136<sup>th</sup> place out of 175 nations (Transparency International, 2014). Iran has suffered from many reported scandals involving fraud. For instance, the Iranian banking system experienced embezzlement of 2.6 billion USD in 2011, which is the biggest embezzlement case in its history (Shushter, 2011). High frequency and profile corruptions have attracted regulatory emphases from the Iranian Supreme Leader and other regulators. For example, the Iranian Supreme Leader, on various occasions, has instructed the heads of government, judiciary system, and parliament to combat financial corruption (BBC, 2008). This background as to fraud, bribery, and corruption in Iran justifies the participants' consideration of bribery as the strongest threat to auditor independence.

### Gifts and Presents

As mentioned before, participants disregard gifts and presents as posing significant threats to auditor independence in Iran. An Iranian employee may bring some cakes to share with his colleagues, without aiming to get something in return (Kwintessential Ltd, 2014). Iranians offer money or gold coins on religious holidays and give gifts on various celebratory occasions such as weddings, successful business deals, or graduations (Iran Visitor, 2015). A host may offer his guest anything that looks attractive in his house as a gift (Betteridge, 1985). The participants' ignorance of gifts as independence threats may show the influence of the Iranian culture on their perceptions. It may show the effect of cultural differences between Iran and countries that do not traditionally perceive gifts in a similar way to Iranians within the audit profession.

### Auditors' Lack of Competence

Prior Iranian research considers auditor's incompetency an independence threat (Mansouri et al., 2009; Salehi & Husini, 2011). However, this study dismisses prior studies' finding. Similar to gifts and presents, a lack of competence is not a significant threat to auditor independence in Iran. This finding aligns with the provision of IAO's 2014 framework where auditor incompetence is not on the list of threats to independence. However, IFAC requires auditors to be competent to perform their tasks. They should have adequate knowledge and experience of audit assignments that they undertake and a good knowledge and understanding of their clients' business and industry (IFAC, 2014b).

### *Analysis of Participants' Responses to the Open-ended Question*

Twenty-nine participants respond to the final question in the questionnaire by nominating other threats to auditor independence than those mentioned in the

questionnaire. Six professionals choose multiple threats. This study obtains 37 instances of new information, suggesting some new threats to independence. Table 8 shows the participants' responses to the open-ended question.

**Table 8.** *Participants' Responses to the Open-Ended Question of this Study*

Participant No	Quote
1	Economic instability is a threat.
2	In my opinion, weak economy of Iran is a threat.
3	Management fraud
4	The small income of auditors and excessive bureaucracy
5	Bureaucracy and non-auditing services
6	Not-audit-related-services may be indicators of a threat to auditor independence.
7	In my opinion auditors' consulting services are signs of a threat to auditor independence in Iran.
8	Auditors' competition and their advisory services
9	The high auditor's fee and small size of audit firms
10	The pressure from management is a threat to auditor independence in Iran.
11	Auditors' advisory and consulting services
12	The auditors' low income may be an indicator of threat to auditor independence in my opinion.
13	The management's wrongdoing
14	Providing management advisory services by auditors may be a threat to auditor independence.
15	I think competition among the auditors is another indicator.
16	Poor infrastructure of the Iranian audit firms
17	Significant amount of fees
18	The auditors' low salary is another factor.
19	The small size of the Iranian audit firms is another indicator of threat to auditor independence.
20	The high amount of auditor's unemployment can be another threat to auditor independence in Iran in my opinion.
21	Providing consulting and advisory services to managers
22	The high unemployment rate of auditors
23	Pressure from management
24	If the auditors sincerely report, they may lose their job. This fear is a threat to their independence.
25	The fact that auditors have to do lots of work and their salary is not enough, encouraging them for wrongdoing.
26	In my opinion, high competition between the audit firms and providing consulting services to management are indicators of a threat to auditor independence in Iran.
27	In my view, the dependency of audit firms to their major clients can be a danger for their objectivity in Iran.
28	Bad financial condition of auditors
29	When the audit firms provide other services to their clients except for their routine services

Table 9 describes the identified themes and categories based on participants' responses to the open-ended question.

**Table 9.** *Identified Themes and Categories Based on Participants' Responses to the Open-ended Question*

Themes	Categories	Definition	Instances
Competition among audit firms	Competition among audit firms	High competition level among Iranian audit firms	3
High audit fees	High audit fees	Clients' provision of high audit fees to auditors	3
Iran's economic condition	High unemployment rate of auditors	Large number of unemployed accountants in Iran	2
	Low income of auditors, weak economy of Iran	Small revenue of Iranian accountants, existing poor economic condition in Iran	7
Management's wrongdoings	Management fraud	Fraudulent activities perpetrated by management	3
	Management pressure	Pressure from management to guide auditors towards a particular direction	3
Non-audit services	Management advisory services	Auditors' provision of consulting services for their clients' management	5
	Consultancy services	Auditors' provision of different types of advisory services for their client firms	6
Poor infrastructure of audit firms	Bureaucracy	Complicated system of Iranian audit firms	2
	Small size of audit firms	Small size of Iranian audit firms	3

An evaluation of this component of the questionnaire shows that eleven participants nominate non-audit services, nine Iran's economic condition, six management's wrongdoings, five poor infrastructure of audit firms, three competition between audit firms, and three consider high audit fees as threats to auditor independence in Iran. The largest number of responses consider non-audit services and Iran's economic condition as 'other' threats. This consideration of non-audit services as a threat is consistent with prior international academic literature (Campa & Donnelly, 2016; Causholli, Chambers, & Payne, 2014, 2015; Quick & Warming-Rasmussen, 2015).

### Non-audit Services

A provision of non-audit services may result in self-interest, self-review, and advocacy threats (IFAC, 2014b). Prior international studies document that non-audit services may impair auditor independence (Ashbaugh, LaFond, & Mayhew, 2003; Francis & Ke, 2006; Kinney, Palmrose, & Scholz, 2004; Rankin, 2004). Non-audit services increase auditors' financial dependency on their auditees, reducing their desire to disagree with their clients' requirements (DeFond et al., 2002). They discourage audit firms from issuing a qualified audit opinion (Hay, Knechel, & Li, 2006b). For example, auditors may issue a clean audit report for financial statements of a company which do not comply with auditing standards (Kinney et al., 2004). Moreover, the consultancy nature of non-audit services brings bias to auditors' judgement (SEC, 2000).

### Iran's Economic Condition

Participants nominate Iran's economic condition as another threat to auditor independence. For example, a participant mentions that:

*"The high amount of auditor's unemployment can be another threat to auditor independence in Iran in my opinion."*

Another respondent mentions that:

*"The auditors' low income may be an indicator of threat to auditor independence in my opinion."*

Iran is one of the youngest countries in the world. Thirty-five percent of Iranians are aged between 15 and 29. Moreover, Iran has a rapid population growth, wherein the size of the Iranian labour force grew by 2% every year during the 2014-2018 period (The Economist Intelligence Unit N.A., 2014). Iran's rapid population growth highlights its need for better employment. However, its unemployment rate is the 16<sup>th</sup> highest in the world, and the country faces an unemployment rate of over 12%. This rate is higher for women and university graduates. University graduates struggle to find a job. Many educated Iranians work in fields that are unrelated to their specialisation. They may even need to have two or more jobs to survive (Bozorgmehr, 2012). According to the Iranian Deputy Labour Minister, Abu-Hassan Firouz-Abadi, around 200,000 Iranians were receiving unemployment benefits in 2014. Abu-Hassan Firouz-Abadi considers high unemployment rate a major challenge for the Iranian government (Anonymous, 2014a). Similarly, the head of Iran's Workers House warns regarding potential workers' crisis (Bozorgmehr, 2012).

International sanctions have decreased economic growth rate of Iran, increasing its unemployment rate. Unemployment remains a major concern for young Iranians, while their country is under sanction (The Economist Intelligence Unit N.A., 2014). According to a former representative of the International Labour Organisation, wrong economic policies have increased unemployment rate in Iran.

The former Iranian president, Mahmoud Ahmadinejad, has focused on offering loans to jobseekers rather than funding infrastructure projects. A reduction in energy subsidies for households and industry has damaged the Iranian economy (Bozorgmehr, 2012). The ease of international sanctions as a result of Iran's agreement with world powers over its nuclear programme along with a policy of reduction of energy subsidies of the new president, Hassan Rouhani, has reduced inflation rate in the country. The new government is scaling back the cash subsidies that were handed out by the former government, leading to a reduction of the inflation rate from 45% to 15% in 2014 (Anonymous, 2014b). The harsh economic condition may encourage auditors to give in to their clients' desire to maintain their income. This leniency can become greater for dependence on higher fees because auditors are more likely to impair their independence to retain their valuable clients (Lim & Tan, 2010).

### *Media Articles and Findings*

This study analyses 49 media articles of different sources for the period 1994 - 2014. It limits its analysis to 2014 as IAO issued the auditor independence framework in 2014. The articles are analysed in chronological order, wherein "1" is assigned to the most recent article and "49" to the oldest article. This study categorises the articles based on their contents into two broad categories of regulatory and economic perspectives. Regulatory perspectives encompass Iran's aspiration to join the international community, and economic perspectives capture articles that refer to economic losses of wrongdoings. Majority of sources have economic perspectives. An evaluation of keywords and publication sources shows that various media sources (such as BBC) frequently discuss financial corruption in the Iranian economy. Moreover, they often criticise IAO. Table 10 describes the entire sample of examined media articles.

**Table 10.** *Description of the Examined Media Articles Including their Titles, Publication Dates, and Keywords and Sources Used to Obtain Them*

Article- No	Keyword	Title	Source	Date
<b>Panel A Regulatory Perspectives</b>				
1	Financial corruption, Iran	Rouhani confronts Iran's hardliners on corruption	The Financial Times Limited	8/12/2014
7	Fraud, Iran	The Iranian government's plan to prevent occurrence of fraud in future	Tabnak	1/05/2014
8	Financial corruption, Iran	Iran president orders fight against financial corruption	BBC	2/02/2014
9	Financial corruption, Iran	BBC Monitoring quotes from Iranian press 01 Feb 2014	BBC	1/02/2014

10	Financial corruption, Iran	Iran intelligence minister opposes publicising financial corruption	BBC	14/01/2014
11	Financial corruption, Iran	Iran arrests business tycoon over corruption scandal	Indo Asian News Service	5/01/2014
14	Audit failure, Iran	Iran MP urges government to pay attention to tax revenues	BBC	31/12/2013
16	Fraud, Iran	Keeping our eyes on Iran	The Jerusalem Post Ltd	25/06/2013
17	Fraud, Iran	Iran Islamic Republic of, United States: Treasury targets network attempting to evade Iran sanctions	Albawaba (London) Ltd	12/04/2013
19	Financial corruption, Iran	Iran Speaker says “intelligence chiefs” involved in financial corruption	BBC	7/01/2013
24	Financial corruption, Iran	Commentary terms embezzlement in Iran unforgivable act	BBC	3/07/2012
25	Financial corruption, Iran	‘State’ bodies stymie Iran privatisations	The Financial Times Limited	30/05/2012
33	Financial corruption, Iran	Iran MPs urge Judiciary to follow up financial corruption network’s case	BBC	10/03/2010
35	Financial corruption, Iran	Iran’s creeping corruption	IBT Media, Inc., The Newsweek/Daily Beast Company LLC	30/11/2009
40	Financial corruption, Iran	Iran leader calls for continuation of campaign against financial corruption	BBC	25/06/2008
42	Financial corruption, Iran	Iran’s new attempt to privatise state-owned enterprises	BBC	31/07/2006
43	Financial corruption, Iran	Iran’s presence at World Trade Organisation inevitable – former president	BBC	25/01/2006

46	Financial corruption, Iran	Single forex rate to curb financial corruption in Iran: Official	Middle East News Online	4/03/2002
<b>Panel B Economic Perspectives</b>				
2	Audit failure, Iran	US watchdog fines Standard Chartered for second time: Money-laundering failure costs bank further \$300m: High-risk dealings went undetected, says regulator	Guardian News & Media Limited	20/08/2014
3	Audit failure, Iran	Iran official dismisses Audit Court report on oil sale to UAE	BBC	23/07/2014
4	Fraud, Iran	Supreme Audit Court of Iran confirms government's taking \$4.1 billion out of NDF	Tribune Content Agency LLC	28/05/2014
5	Accounting scandal, Iran	Brief: Iran dismisses scandal of selling recorded phone talks	Tribune Content Agency LLC	20/05/2014
6	Financial corruption, Iran	Fugitive accused of financial corruption handed over to Iran	Tribune Content Agency LLC	7/05/2014
12	Financial corruption, Iran	Iran daily discusses financial corruption in Turkey	BBC	3/01/2014
13	Audit failure, Iran	Iran government neglects tax revenue due to high oil income	BBC	1/01/2014
15	Audit failure, Iran	Iran Audit Court accuses president of misspending surplus revenues	BBC	25/06/2013
18	Financial corruption, Iran	Iran: Corruption case raises Iran domestic tensions	Al Jazeera	4/02/2013
20	Accounting scandal, Iran	Standard Chartered bank accused of scheming with Iran to hide transactions	Guardian News & Media Limited	7/08/2012

21	Accounting scandal, Iran	Standard Chartered diving despite Iran scandal denial	Evening Standard Limited, Solo Syndication, a division of Associated Newspapers Ltd	7/08/2012
22	Accounting scandal, Iran	Death terms in Iran bank scandal	Al Jazeera	30/07/2012
23	Accounting scandal, Iran	Iran bank fraud scandal: 4 sentenced to death	Yeganeh	30/07/2012
26	Financial corruption, Iran	Brief: MP: Corruption costs Iran \$34 billion a year	Tribune Content Agency LLC	18/12/2011
27	Audit failure, Iran	Iran Audit Court sends report on government "violations" to judiciary	BBC	17/12/2011
28	Accounting scandal, Iran	Iran arrests relative of president's aid over embezzlement scandal	Xinhua News Agency	8/11/2011
29	Fraud, Iran	Two other suspects arrested over Iran's embezzlement case	Tribune Content Agency LLC	28/10/2011
30	Accounting scandal, Iran	Iran's largest banks swindled out of \$2.6 Billion	NPR	27/10/2011
31	Accounting scandal, Iran	Quds Force linked to bank in Iran scandal	The Globe & Mail division of Bell Globe media Publishing Inc.	12/10/2011
32	Accounting scandal, Iran	Israeli billionaire at heart of Iran trade scandal dies	The Financial Times Limited	3/06/2011
34	Financial corruption, Iran	Iran arrests 15 members of "financial corruption network"	BBC	30/01/2010
36	Fraud, Iran	Iran: "Iran's missing oil money"	Thai News Service Group	8/05/2009
37	Fraud, Iran	Iran: In search of \$1b missing oil money in Iran	Thai News Service Group	16/02/2009
38	Fraud, Iran	Iran minister sacked over forgery	BBC	4/11/2008
39	Financial corruption, Iran	Iran charges seven with financial corruption	BBC	14/07/2008

41	Audit failure, Iran	President orders dismissal of Iran Insurance's board of directors	BBC	9/05/2007
44	Financial corruption, Iran	Halliburton's activities suspended in Iran	BBC	22/08/2005
45	Accounting scandal, Iran	Iran: Oil Ministry to complain against Norway over Statoil scandal	BBC	9/11/2003
47	Financial corruption, Iran	World: Middle East Tehran mayor sentence reduced	BBC	24/12/1998
48	Accounting scandal, Iran	Tehran mayor is arrested, accused of embezzlement	Deseret News	5/04/1998
49	Financial corruption, Iran	Iran needs foreign investment	Chemical Week	20/07/1994

Triangulation of financial media analysis against the questionnaire results suggests that bribery frequently occurs in Iran. Thirteen of 49 articles (26.5%) show that bribery exists in the country, justifying its consideration as the most serious independence threat by participants. For example, article 41 with the title of "president orders dismissal of Iran Insurance's board of directors" shows that the president orders this dismissal because of a State Audit Office's report regarding extensive scandal cases in the insurance company.

An analysis of the economic impacts of wrongdoings shows that they severely damage the country, causing Iran to lose billions of dollars. For example, article 4 with the title of "Supreme Audit Court of Iran confirms government's taking \$4.1 billion out of NDF" describes how the government illegally took large money out of the National Development Fund. The analysis supports participants' nomination of Iran's economic condition as a threat to auditor independence. An examination of gifts shows that they are not discussed in media articles, supporting participants' view to disregard them as threats.

### *Robustness Checks*

This study performs two robustness checks to verify its findings.

### Friedman Test

This study conducts a Friedman test to prioritise different threats to auditor independence, following (Salehi, 2011). The test shows a statistically significant difference in perceptions regarding different threats to auditor independence,  $X^2(2) = 31.883, p = 0.000$ . Table 11 presents the results.

**Table 11.** Friedman test to Prioritise Different Threats to Auditor Independence in Iran

	N	25 <sup>th</sup>	Median	75 <sup>th</sup>	Mean
The Perceptions regarding gifts	40	2.000	2.000	4.000	2.610
The Perceptions regarding bribery	40	4.000	4.000	5.000	4.700
The Perceptions regarding long-term relationship	40	3.000	4.000	4.000	3.460
The Perceptions regarding the prospects of reappointment	40	3.000	4.000	4.000	3.700
The Perceptions regarding non-existence of audit committee	40	3.000	4.000	4.000	3.380
The Perceptions regarding auditors' lack of competence	40	2.000	3.000	4.000	3.150

N = Number of observations.

The perceptions regarding bribery obtain the highest mean (4.700), suggesting that participants consider bribery as the most severe threat.

#### Exclusion of Gifts and Presents and Auditors' Lack of Competence

This study does not find 'gifts and presents' and auditors' lack of competence as significant threats to auditor independence in Iran. Hence, it excludes them to re-estimate the findings regarding different threats. Table 12 shows the outcomes.

**Table 12.** T-test of Participants' Perceptions Regarding Identified Threats to Auditor Independence without Gifts and Auditors' Lack of Competence

Threats to Auditor Independence	N	Mean	SD	Mean Difference	t	p-value
Bribery	40	4.18	0.93	1.18	28.37	0.000
Long-term relationship	40	3.48	0.93	0.48	23.55	0.000
Prospects of reappointment	40	3.58	1.06	0.58	21.34	0.000
Non-existence of an audit committee	40	3.48	0.85	0.48	25.95	0.000

N = Number of observations.

The test confirms previous findings. All remaining threats are statistically significant. Moreover, bribery is the most potent threat to independence.

## Conclusion

This study evaluates threats to auditor independence in Iran through the distribution of a mixed questionnaire to Iranian professionals and thematic analysis of media articles. Findings show that participants consider bribery, followed by prospects of reappointment as the most severe threats. Long-term relationship and non-existence of an audit committee are equally the next important threats. However, gifts and presents, and auditors' lack of competence

are not threats. Moreover, participants perceive non-audit services and Iran's economic condition as other threats to independence. The consideration of bribery as the strongest threat shows its entrenched position within Iranian businesses and a need to introduce advanced strategies to safeguard businesses against it. The Iranian government should introduce advanced strategies to safeguard the country against bribery. This will eventually enhance auditor independence. High losses caused by corrupt practices encourage authorities to concentrate on issues of corruption and create some practical plans to minimise it. They need to introduce better regulations to address the corruption concerns in Iran.

The nomination of Iran's economic condition by participants as a threat shows the influence of the economic factors on business people's behaviour. The undesirable economic condition of the country is acknowledged, through analysis of the media articles. This analysis suggests the implementation of practical ways to improve the economic condition of the country. A better economic condition reduces the need for all participants in business activity to use illegal or immoral methods to conduct their business, increasing the overall health of the capital market. The government may need to think of some solutions to reduce the unemployment rate of auditors and increase their income level. The audit regulations may need to provide some financial safeguards for auditors. The provision of more job opportunities to auditors reduces their desire to succumb to management pressure, increasing their independence. Similarly, higher levels of income increase auditors' persistence against the management's fraudulent requests.

The nomination of non-audit services as threats suggests to the Iranian regulator to place more emphasis on them and introduce new rules to restrict them. Because non-audit services are widely acknowledged as threats to auditor independence in international literature, Iran's new aspiration to join the international community may encourage its regulator to introduce similar rules as those in IFRS countries to regulate non-audit services. The consideration of non-audit services as potential threats may improve auditor independence in Iran. Similarly, the participants of this study's consideration of prospects of reappointment, long-term relationship, non-existence of audit committee, and auditors' lack of competence as threats recommend to the Iranian regulator to align audit regulations to those of IFRS countries. The regulator should consider this study's identified threats as potential threats to auditor independence. However, disregard of gifts and presents as threats reminds us of the importance of cultural factors in a business environment. The regulator should also align audit regulations with cultural perceptions of people. It may need, while aligning the rules, to help Iran to join the international community, consider specific cultural factors too.

IAO has not ranked in order of priority the 11 identified threats to auditor independence in Iran (see Section 1). This study recommends some improvements to the current IAO's independence framework, as follows:

Bribery should remain as the strongest threat in the framework.

A long-term relationship between auditors and their clients (which covers audit partner tenure and prospects of reappointment) should remain as the second strongest threat in the framework.

The non-existence of an audit committee should be included as the third strongest threat in the framework.

Non-audit services should remain as priority threats.

High management pressure on auditors (which relates to prospects of reappointment), and high audit fees (which is an identified category of the open-ended question) should remain in the framework as priority threats.

Acceptance of gifts and presents; family, personal, or financial relationship between auditors and their clients; inclusion of auditors in their clients' board of directors, senior officers, or partners; existence of contingent fees; ownership of audit firms by those other than auditors; presence of former audit partners as clients; and existence of lawsuits between auditors and their clients should remain as non-priority threats in the framework.

This study contributes to a better understanding of auditor independence in Iran, which may apply to other regional settings. Moreover, it provides some suggestions to improve the current IAO's independence framework. However, it suffers from some limitations. First, many Iranian audit firms are not computerised (Salehi, Rostami, & Mogadam, 2010). So, a paper-based questionnaire was used. The capacity to collect data was reduced, and it was time-consuming. Second, 40 responses were obtained in total, reducing the credibility of the outcomes of this study. For example, Salehi et al. (2009a) obtain 441 responses, Ramazani and Atani (2010) 178 responses, and Salehi (2011) 150 responses in other comparable Iranian studies. Third, the obtained data are limited to the city of Tehran and do not provide any information regarding the practitioners' perceptions in other Iranian cities. Fourth, this study used an agent in Iran, which prevents it from verifying that the testing has occurred in a controlled environment. For example, it is unclear whether or not audit firms that agreed to participate had any input into their participants, which may have biased their responses.

This study provides several avenues for future research. First, a more comprehensive analysis of media articles may provide better capacity for triangulation of outcomes of the questionnaire. Second, future studies may evaluate other threats that IAO has identified and obtain participants' views in other Iranian cities than Tehran. Third, future broad-scale studies of the effects of the Iranian culture on other aspects of the audit profession is another avenue. Fourth, an assessment of the best possible regulations to address non-audit services and an analysis of their implementation barriers are desirable. Fifth, future studies may analyse the effects of Iran's economic condition on other aspects of the audit profession.

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**Appendix 1. The Questionnaire of this Study**

**Section I. Demographic Information**

What is your highest qualification level?

	Business-related	Non-business-related
High-school diploma	<input type="checkbox"/>	<input type="checkbox"/>
Bachelor	<input type="checkbox"/>	<input type="checkbox"/>
Master	<input type="checkbox"/>	<input type="checkbox"/>
PhD	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any professional accounting qualification?

Yes  No

If yes:

Iranian Accounting Association	<input type="checkbox"/>
Iranian Association of Certified Public Accountants	<input type="checkbox"/>
Iranian Institute of Certified Accountants	<input type="checkbox"/>

If you have any other qualification indicate it, please:

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Do you have any accounting experience?

Yes  No

If yes:

1 - 3 years	<input type="checkbox"/>
4 - 6 years	<input type="checkbox"/>
7 - 9 years	<input type="checkbox"/>

Over 10 years (Indicate the number of years, please):

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.....

Describe the type of accounting experience that you have, please:

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What is your current occupation?

Regulator	<input type="checkbox"/>
Accountant	<input type="checkbox"/>
Auditor	<input type="checkbox"/>
Consultant	<input type="checkbox"/>
Investor	<input type="checkbox"/>

Other (Indicate your current occupation, please):

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 .....

How long have you been in your current occupation?

- 1 - 3 years
- 4 - 6 years
- 7 - 9 years

Over 10 years (Indicate the number of years, please):

.....  
 .....

*Section II: Experience and Perception on Threats to Auditor Independence*

Each of the following presents a scenario of ethical issues. First, please mention any experience that you may have had regarding the specified ethical issues in your professional life. Then, please rank each scenario on a scale of one (1) as low to five (5) as high across the questions.

The Iranian Code of Professional Conduct considers the gifts and presentations as serious threats to auditor independence (Term: 21.13). The Code indicates that the auditors should refrain from accepting or giving any gifts or presentations that may affect their professional judgement (Term: 15.2.E).

Have you ever had any experience regarding gifts and presentations in your professional life?

Yes  No

How much of monetary value of a gift is more than a reasonable amount in your opinion?

- \$0
- \$50 or less
- \$100 or less
- \$200 or less

Higher (Indicate the value, please):

.....

Gifts and presentations are indicators of threat to auditor independence in Iran.

1      2      3      4      5

Gifts and presentations are not indicators of threat to auditor independence in Iran.

Article 49 of the Iranian Constitution requires the Iranian government to confiscate the wealth obtained from bribery and return it to its legitimate owner. Further, the Iranian Institute of Certified Accountants Code of Professional Conduct considers the moral characteristics of accountants as the most important part of their profession.

Have you ever had any experience regarding bribery in your professional life?

Yes  No

Bribery is an indicator of threat to auditor independence in Iran.

1      2      3      4      5

Bribery is not an indicator of threat to auditor independence in Iran.

According to the Iranian Code of Professional Conduct a long-term relationship between the auditors and their clients may threaten auditor independence. In such circumstances, the auditors should take the necessary measures to safeguard their independence.

What is the longest duration of a relationship between the auditors and their clients that you have ever seen in your professional life?

- 5 years or less
- 7 years or less
- 10 years or less

Other (Indicate the number of years, please):

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Long-term relationship is an indicator of threat to auditor independence in Iran.	1	2	3	4	5		Long-term relationship is not an indicator of threat to auditor independence in Iran.
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The academic literature suggests that the prospect of reappointment can endanger auditor independence, since the auditors may sacrifice their commitments in order to continue receiving their audit fees.

The prospect of reappointment is an indicator of threat to auditor independence in Iran.	1	2	3	4	5		The prospect of reappointment is not an indicator of threat to auditor independence in Iran.
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According to the Tehran Stock Exchange regulations, audit committees assist the Board of Directors regarding internal control and risk management, financial reporting, internal audit effectiveness, independent audit effectiveness, and compliance with the rules, provisions, and requirements.

Have you ever had any experience regarding working with an audit committee in your professional life?

- Yes  No

The non-existence of audit committee is an indicator of threat to auditor independence in Iran.	1	2	3	4	5		The non-existence of audit committee is not an indicator of threat to auditor independence in Iran.
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According to the Iranian Code of Professional Conduct the auditors should have the required skills to perform their duties. They should consistently maintain their professional knowledge and skill of regulations and changes in the profession.

The auditor lack of skill is an indicator of threat to auditor independence in Iran.	1	2	3	4	5		The auditor lack of skill is not an indicator of threat to auditor independence in Iran.
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*Section III: Additional Comments on Threats to Auditor Independence in Iran*

Are there any other factors that are indicators of threat to auditor independence in Iran in your opinion?

Yes  No

If yes indicate them, please:

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## **The Working Poor Facing the Great Recession in Southern Europe**

*By Estelle Sommeiller\**

*The standard measure of poverty at work in Europe is the in-work at-risk-of poverty rate published by Eurostat. According to this indicator, the working poor in Southern Europe have somehow been affected by the financial crisis of 2008 and the Eurozone debt crisis that followed in 2010. Spain, Italy and Portugal display rates ranging between 9% and 10% in 2007 compared to 11% - 13% in 2017. In Greece, in-work poverty declined from 14% in 2007 to 11% ten years later. Such a result may be surprising in the context of the austerity policy measures that marked the decade in this area of Europe. Using EU-SILC 2005-2018 microdata, this article aims to extend Eurostat's rates of in-work at-risk-of poverty in several ways. First, poverty lines are computed so as to be anchored in time: each of the four national poverty thresholds is set at 2008. Second, the statistical population of workers is expanded to include the people displaying weak ties to the labour market but still in the exercise of remunerated activities at some point of the year. Third, the black box of the household approach is opened thanks to Ponthieux's concept of poverty in earned income. Fourth, the poverty headcount ratios are supplemented by the two other measures that Sen suggested to adopt on a regular basis: the poverty gap (the economic distance separating the income of the poor from the poverty line) and the Gini index measuring how unequal the income distribution of the poor may be. Once those technical details are fixed, the question of working poverty is addressed over time (before and after the Great Recession) under its three fundamental dimensions: the labour-market, the family net, and the state institutions. (JEL J30, I30, E24)*

**Keywords:** *Measurement, Poverty in Earned Income, Standard Employment, Solo Self-Employment, Part-Time Work, Family Net, Labour-Markets Reforms.*

### **Introduction**

The core topic of this paper lays the emphasis on the links between poverty and employment. It aims at providing complementary measures of monetary poverty for people located at the bottom end of the labour market. Though a masterpiece of the international standards, Eurostat's indicator of in-work at-risk-of-poverty may yield misleading results if solely used or not properly understood. Eurostat does provide many other indicators measuring poverty among the employees, the employed persons except employees, the not-employed persons, the unemployed or the retired. However, these indicators would be ideal in a virtual world where all other things are held constant. The occurrence of the 2007-

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2008 financial crisis has changed the deal and comparing poverty at work before or after its onset requires some adjustments. This is one of the reasons why this empirical study is applied to the European countries that have experienced long years of economic recession, political and social turmoil in the aftermath of the debt crisis of 2010: Italy, Spain, Portugal and Greece. More than a geographical area bordering the Mediterranean Sea, Southern European countries share some cultural values, linguistic features, historical heritage, socio-economic development, and, among other things, strong subnational inequalities (Lombardy and Piedmont in Italy, the Basque region and Catalonia in Spain, northern Portugal, Athens in Greece). These economies also share the characteristics of a residual model of welfare state, in contrast with Northern European countries.

The first section explains the reasons why Eurostat's poverty standard measures need to be adjusted and complemented. The next three sections explain the choice of the variables finally selected at three levels: poverty thresholds, the definition of worker and the household dimension of the poverty indicator. An additional section is developed to specify more precisely which indicator is best suited to each dimension of poverty (low wages or lack of work, family and state). The last five sections finally get into the results, displaying the time trends of the alternative poverty measures: a) the share of poor people in standard employment and the extent to which the earned income of this subgroup falls short of the poverty line; the share of poor people in non-standard forms of employment ('solo' self-employment, and involuntary part-time employment) given the labour income they earn in a year; b) the share of people being poor in earned income and who living in a non-poor household; and within this group, the share of female workers; c) the individualised measure of poverty in labour income is left out at this point to consider the equivalised disposable income instead; income inequality among the working poor is measured by two Gini coefficients, one before and one after public social transfers.

### **In-Work Poverty Rates: Measurement Matters**

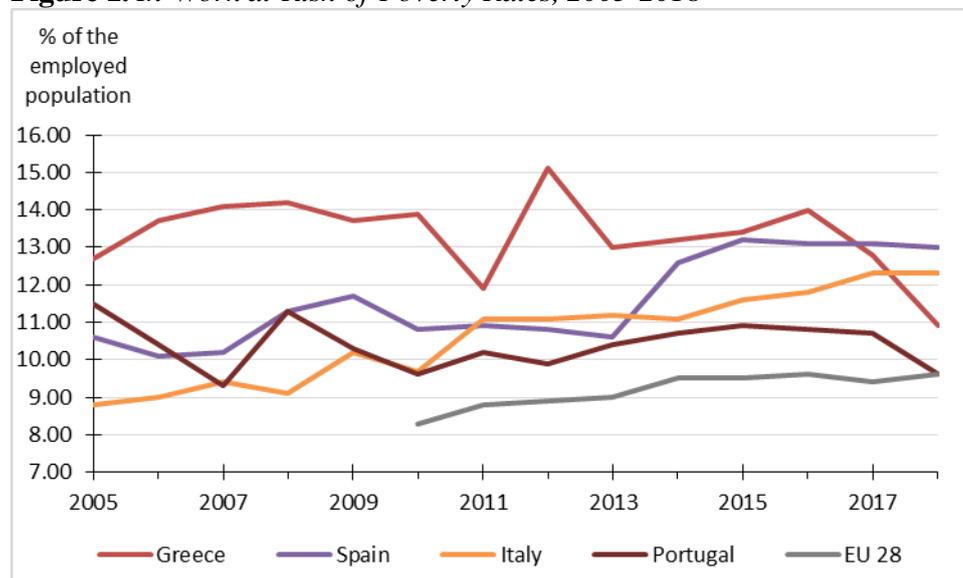
The standard ratio counting the number of working poor in Europe is the so-called in-work at-risk-of-poverty rate published by Eurostat. In the total working-age population (18-64 years), Eurostat's in-work at-risk-of-poverty rates record the proportion of employees or self-employed working full-time or part-time over half of the year (preceding the SILC interview) and who live in a household whose disposable income per unit of consumption<sup>1</sup> does not exceed the poverty line, which is set at 60% of the national median income. According to this indicator (see Figure 1), the shares of the working poor have somehow increased in Southern Europe throughout the last decade, except in Greece where in-work poverty dropped to pre-crisis levels. The in-work at-risk-of-poverty rates of the

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<sup>1</sup>Consumption units have been designed to consider the economies of scale that individuals benefit from sharing the same dwelling place. An adult living alone represents 1 consumption unit; a couple 1.5; any other adult member aged 14 and over represents 0.5, and a child under 14, 0.3.

four countries all display a rather high degree of volatility, revealing no visible correlation to the curves of the economic cycle typical of that period of time.

**Figure 1.** *In-Work at-Risk-of-Poverty Rates, 2005-2018*



Source: Eurostat [ilc\_iw01].

Note: Population of the 18-64 years-old persons being employed (“in-work”). The standard income threshold is expressed in current prices. The income measure is the equivalised disposable income expressed in current prices.

Looking at this graph may be puzzling to the untrained eye. Why is the time trend of working poverty so erratic in Southern Europe? One would have expected a sharp increase of working poverty for reasons that Eurofound (2017, p.15) state quite clearly: “Given the mechanisms that drive in-work poverty – including low wages and low work intensity – one would expect to have found it increasing during the crisis. An economic downturn could depress wages and decrease the number of hours employers pay for work, both of which would increase in-work poverty. Rises in unemployment would also adversely influence in-work poverty by decreasing the number of earners in a household. Furthermore, austerity measures could lead to the reduction of social transfers, further decreasing household income (Crettaz, 2015)”. Before breaking it down, a closer look at how Eurostat’s indicator is constructed may change the overall picture. There are three dimensions of Eurostat’s definition of in-work at-risk-of poverty rate that require attention: the poverty threshold, the economic status of being employed, and its final computation at the household-level. Thanks to microdata from Eurostat EU-SILC [footnote] it is possible to reconstruct alternative measures of poverty”. [footnote] = “European Union Statistics on Income and Living Conditions (EU-SILC), user database 2004-2017, version of 2019-03. European Union Statistics on Income and Living Conditions (EU-SILC), user database 2005-2018, version of 2019-09. Eurostat is not responsible for the methods and results of the project. The responsibility for all conclusions drawn from the data lies entirely with the author.

## **Poverty Thresholds**

With a poverty threshold based on a share of the median (or mean) income at the national level, the Eurostat indicators of poverty are not sensitive to any surplus of economic growth that would be equally shared across people. Had everyone earned a thousand times the income received a year earlier, in-work poverty rates would remain the same. Conversely in the case of an income loss. Differently put, the European measure of income poverty does not allow to determine whether a change in the poverty rate is due to a change in the national income or a change in the number of poor people. This is an issue when the national economies collapsed in Southern Europe in the aftermath of the debt crisis of 2010: Whenever the standard measure of income poverty goes down substantially, it is not possible to conclude that the number of poor people declined. It may also be the case that the national income fell faster than the average income of the poor. In Greece more than anywhere else, the European measures of poverty fail to capture the impoverishment of the population that other statistics such as the gross domestic product per capita suggest. How best to calculate a poverty line is an extensively debated question in the academic literature.

How much is enough to live on? What is an adequate minimum living standard? Which income level makes an adult person poor or non-poor? Answering these sensitive questions necessarily implies to make normative choices. The academic literature opposes the European view of a 'relative' measure of poverty, which essentially yields poverty rates that may be seen as income inequality indicators, to an Anglo-Saxon concept of poverty as an 'absolute' measure of the basics needs. Several alternative solutions were suggested. One of them includes non-monetary poverty indicators such as the material deprivation rate that has been included in Eurostat's 'Europe 2020 indicators'. It is defined as the percentage of population with an enforced lack of basic material necessities and consumer durables. Eurostat set out a list of nine material deprivation items in the 'economic strain and durables' dimension. A lack in at least three of them makes a person materially deprived. The material deprivation rate is not a poverty threshold per se, but an alternative measure to the standard poverty rate. Even though the material deprivation rate is "more absolute in nature" as Crettaz (2015) pointed it out, the poverty threshold used in the material deprivation rate remains the same as in the monetary poverty rate: 60% of the national median equivalised disposable income, leaving the problem unsolved.

Developed by Orshansky (1965) the same year that President Johnson declared war on poverty, the concept of poverty in the US refers to a minimum subsistence level for families of different size and composition. Orshansky's definition of poverty line gave birth to the so-called "poverty guidelines" used nowadays by the statistical authorities to determine whether a family is eligible to social assistance programs or not. If "it is not possible to state unequivocally "how much is enough," she writes, "it should be possible to assert with confidence how much, on an average, is too little". The US poverty line was therefore based on the average cost that a representative American household spent on the minimum food diet in

1963. This cost simply was multiplied by three to yield the 1963 poverty line. Setting the multiplicative parameter at three comes from a statistical survey conducted by the Ministry of Agriculture in 1955 where the food budget of a typical American household represents one-third of its disposable income (after social transfers). The poverty line of the following years is adjusted for inflation according to the consumer price index. Hence the consistency of its time trend in real terms. By construction, the US poverty line necessarily lies below the other Western countries' poverty lines based on the national median (or mean) income.

In Europe since the early 1990s, the minimum income concept has echoed through the so-called "reference budgets" (Concialdi, 2014). Debating on how best to define a minimum income scheme in Europe, the European institutions recommended the member states to agree on a common method for drawing up such reference budgets (ONPES Report 2014-2015). In some countries like France and the UK, the reference budgets comprehend more than the survival income without which it is not possible to physically exist, with the concept of an individual's free choice to participate in the society's life (Crédoc, IRES, 2014). Such a comprehensive approach complies with the guidelines provided by the 2004 European Council: Due to income resources considered insufficient in the society in which they live, the poor "may experience multiple disadvantages through unemployment, low income, poor housing, inadequate health care and barriers to lifelong learning, culture, sport and recreation. They are often excluded and marginalised from participating in activities (economic, social and cultural) that are the norm for other people and their access to fundamental rights may be restricted". The standards of living that are derived from this comprehensive approach of reference budgets match quite closely the standards of living extracted from the national accounts macrodata. By nature, they both lie well above the income measures coming from household surveys like EU-SILC. In 2011, the average standard of living indicator from SILC surveys represents about 70% of the average standard of living indicator from the national accounts in Italy, and around 60% in Greece, Spain and Portugal (Concialdi, 2014, p. 30 Figure 3). Consequently, reference budgets cannot be substituted to the conventional poverty threshold estimates derived from household surveys (they are not intended to do so). This conclusion is all the more robust because another methodological issue arises: At the lower tail of the income distribution, the OECD-modified equivalence scale used in household surveys underestimates the equivalised disposable income in comparison with the reference budgets of the same household type. For a couple with two children, the discrepancy between the two measures ranges from 10% to 15% according to the 2014 study by Crédoc and IRES on the French reference budgets. By nature, reference budgets are not poverty lines. An absolute measure of poverty line is an international standard of exclusion. A reference budget is an international standard of inclusion. Therefore, the poverty lines, when derived from reference budgets and household surveys, refer to conceptual frameworks that are too far apart to substitute one to the other without producing misleading results.

Another way of defining the poverty threshold consists in anchoring its value at a fixed point in time, in real income terms (i.e. adjusted for inflation) as in

Jenkins et al. (2013), Dicharry B., Terra I. (2016). Figure 2 compares two different threshold types over the past decade: the annual poverty thresholds in current prices (proper to the standard measure of in-work at-risk-of poverty rates) and the national thresholds of 2008 yearly adjusted for inflation thereafter.

By construction, the thresholds anchored in time follow a perfectly linear path in contrast with the volatile dashed lines of the 60% share of the national median income. In the remaining course of the paper, the poverty threshold adopted is Eurostat's at-risk-of-poverty threshold for a single-person household in 2008. It is adjusted for overall price inflation between 2008 and 2018 (annualised each year of the sample according to the average annual growth rate of the 2008-2018 time span). Cross-country comparison is now feasible in this regard. Eurostat does provide an at-risk-of-poverty rate with a poverty threshold anchored in 2008. It is not available by the employment characteristics of the working-age population like the standard in-work poverty risk is.

There is a time limit in the exercise of anchoring poverty lines in time. It might make sense over the very long run in the case of a poverty line defined as basic human survival needs, like the US one. However, in the European case where the poverty threshold is a share of the national income, it cannot be relevant for more than one economic crisis at a time. The double crisis of 2008 and 2010 is one. Beyond that point, it does not make sense any longer.

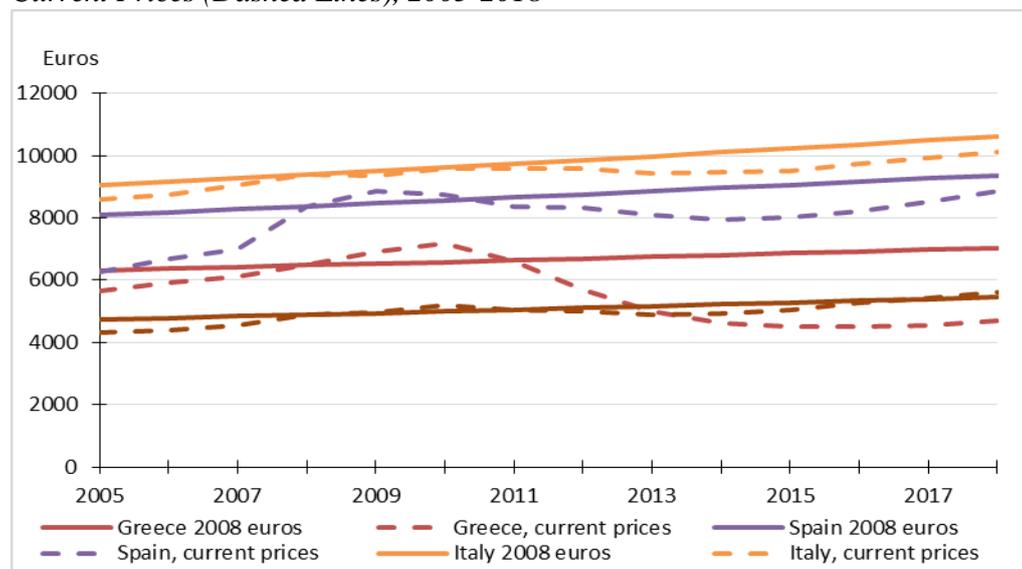
The question of which year to anchor poverty at results from an arbitrary choice that is arguable. It could be any year between 2005 and 2009 although it cannot be strictly precise because of the definition of the income reference period in SILC. Set at twelve consecutive months, the income reference period may be a moving period (such as the year preceding the date of the interview) rather than a fixed period of time (such as a tax year). The minor cross-country comparability issues it raises are here left unanswered<sup>2</sup>.

The median income considered for each country is a unique number per year, set at the national level for the whole population. It is not an array of median incomes estimated per family type as we sometimes encounter in the social sciences literature.

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<sup>2</sup>For instance, in Ireland the Central Statistics Office (2018, p. 7) clearly explains the problem: "SILC is an annual survey. Information is collected continuously throughout the year with household interviews being conducted on a weekly basis. The income reference period for SILC is the twelve months immediately prior to date of interview. Therefore, the income reference period differs from household to household (depending on the interview date) and overall within the 2017 dataset we have income data spanning from January 2016 to December 2017. The CSO plans to change the income reference period from the 2020 SILC to the calendar year immediately preceding the SILC year. This means that the income reference period for the 2020 SILC will be from January 2019 to December 2019."

**Figure 2.** Poverty Thresholds Anchored at 2008 versus Standard Thresholds in Current Prices (Dashed Lines), 2005-2018



Source: Eurostat [ilc\_li01] for the poverty threshold of a single-person household and Eurostat [prc\_hicp\_aind] for the harmonized index of consumer prices (HICP).

Note: The annual rates of change of the HICP provided by Eurostat are used to calculate one single overall growth rate over the 2008-2018 time period. The corresponding average annual increase is then applied to annualize the national poverty threshold of 2008 each year of the 2004-2018 time period. Hence the straight lines on the graph.

The second methodological question that the standard poverty risk indicator raises is the definition of being employed or ‘in-work’.

### How Best to Count Workers?

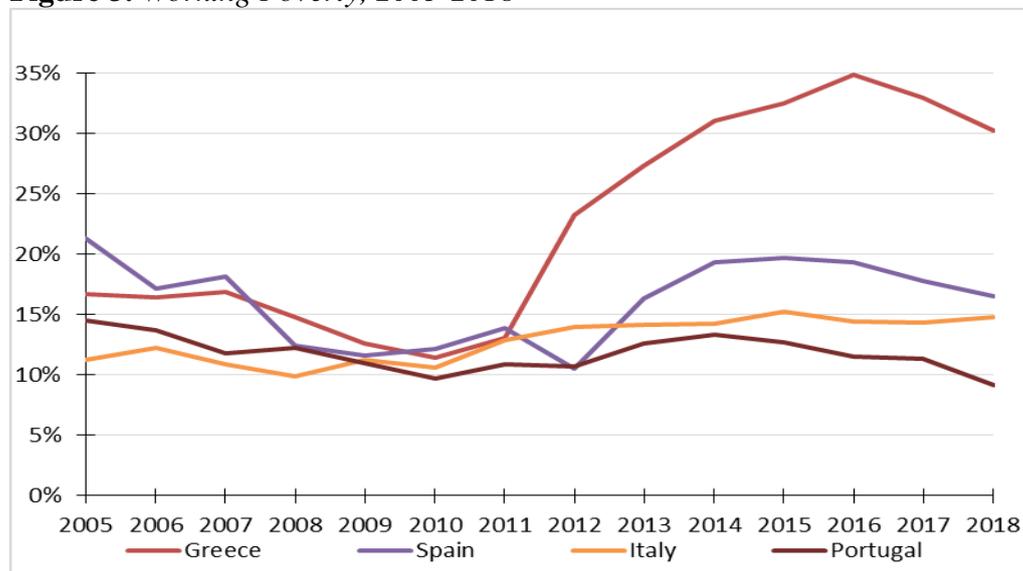
The in-work at-risk-of poverty rate applies to the population being employed. According to Eurostat, an adult person is said to be ‘in work’ or ‘employed’ whenever s/he has been working (full-time or part-time as employees or self-employed) for at least seven months during the year preceding the interview. This definition accords with the definition of other groups of the working-age population, all based on the most-frequent activity status as the main criterion of definition. For instance, an adult person is considered unemployed whenever the cumulated number of months spent in unemployment strictly exceeds half a year. These population breakdowns look quite logical.

However, what it means to be a worker does impact the final poverty measure. Ponthieux (2010), Marx and Nolan (2012), Crettaz (2015), Horemans et al. (2016), and Horemans and Marx (2017) all pointed it out: the Eurostat definition of workers is restrictive. The ILO definition of worker entails at least one hour of paid work during the reference week. Theoretically, it includes all specific groups of working people, especially those displaying weak ties to the labour market. Precisely to include this population subgroup, Crettaz (2015, p. 135) proposes to adopt the ILO definition of work: “any person who held a job at the time of the

interview is a 'worker', whatever her or his previous work record." However, applying the ILO concept to survey data may not be as straightforward as it looks: any person interviewed in between two temporary positions cannot be recorded at work as soon as the employment gap lasts more than a week, leaving those persons out of the sample. It is therefore possible that the sample of ILO-defined workers is not larger than the 'in-work' sample, if not smaller. It turns out to be the case in all of the EU-SILC annual releases. Arguing for a broader understanding of 'being in-work', Horemans et al. (2016, p. 7) use another variable of EU-SILC: the self-defined current economic status. "Because we do not want to exclude workers with weak labour market attachments, we consider people to be 'working' if they indicate that this was their main activity status at the time of the interview." The latter two definitions (working at least one hour during the previous week and self-declared current economic status) capture the activity status taken at one point in time, as of the time of the interview. They both miss the cumulative effect embedded in the concept of annual earnings. One variable does not: the number of months spent at paid work over the calendar year. The present contribution therefore considers a worker any person working at least one month a year, whether at a full-time or a part-time work, as an employee or a self-employed, in the working-age population (18-64 years-old). The number of months spent at work results from reliable cross-sectional variables (displaying almost no missing values) over all the EU-SILC annual editions.

Figure 3 displays the reconstructed poverty rates based on poverty thresholds anchored at year 2008 within the population of people whose equivalised disposable income includes at least one month of labour income in a year. Is the Great Recession appearing clearly on the graph this time?

**Figure 3. Working Poverty, 2005-2018**



Source: Author's Own Calculations using EU-SILC Microdata.

Note: Population of the 18-64 years-old persons spending at least one month a year at work. Poverty thresholds anchored at year 2008 and adjusted for price inflation. The measure of income is equivalised disposable income expressed in current prices.

Visually speaking, Figures 1 and 3 contrast in scale. The four countries record working poverty rates above 10% over the entire time-period, except in Portugal in 2018. Part of this result is necessarily explained by the overall growth rate of the poverty threshold (8,8%, 11,8%, 13,2% and 11,5% in Greece, Spain, Italy, Portugal respectively) between 2008 and 2018. However, the explanatory factors at play cannot be reduced to the linear time trend of the poverty thresholds. The magnitude of poverty in Greece and Spain now appears clearly in the aftermath of the double-crisis of 2008 and 2010. The four national poverty rates converged to the 10%-12% interval in 2010, the turning point of the time-period, before reaching a maximum level in 2016 for Greece, 2015 for Spain and Italy, 2014 for Portugal. The maximum point of 35% in Greece in 2016 speaks volume on the monetary turmoil that large shares of the working-age population have been going through for several years in a row. According to Figure 3, none of the four countries of Southern Europe, in terms of working poverty, has in 2018 recovered from the occurrence of the Great Recession, except Portugal.

That being set says nothing about the links between employment and poverty. The primary goal of the present contribution is to document the close association between the occurrence of the double 2008-2010 crisis and the chances, on a two-tier labour market particularly segmented in Southern Europe, of the insiders and the outsiders of falling into poverty. With regard to the labour-market structure, further clarification is needed at two levels: the population of workers and the income sources. The population of workers mixes together working-age adults spending one month at work and others spending a full year at work. Combining months of employment with months of unemployment or inactivity blurs the frontiers between working poverty accruing to low-paid job (wage effect) or working poverty accruing to insufficient amount of work (employment effect). Within the population of workers, the subgroup of 'standard' workers, i.e. the employees working full-time in an open-ended position (permanent contract) is distinguished from the group of adult persons working in atypical forms of employment. The latter group itself is further divided into two subgroups well known for being highly exposed to the risk of poverty: the self-employed hiring no staff and the part-timers who wish to work more hours but who cannot for economic reasons. Shedding light on the wage effect separately from the employment effect also requires to focus on earned income sources at the personal level rather than equivalised disposable income at the household level. Opening the black box of the household's total income is the purpose of the next section.

### **Separating the Individual Dimension from the Household Dimension of Poverty**

Whenever poverty is analysed from a labour market perspective, a statistical mismatch occurs between an equivalised measure of income and personal labour earnings. By definition, equivalised income adds together the various income sources from all adult members of the household and then divides this total by the

household equivalised size, so as to take into account the economies of scale realized in a housing unit dwelling more than one single adult. In other words, any person working in a low-paid job is not considered at risk of poverty whenever s/he lives in a household with equivalised income above the poverty line. Defining in-work poverty this way leads to the gender paradox: Men are statistically recorded as poorer than women under the poverty approach whereas more women than men are poor from a low-paid employment perspective. The gender paradox holds true in all of the four Southern European countries over all years using the standard measure of equivalised disposable income. To avoid any bias in the results, the gender literature suggests individualised measures of income. Meulders and O'Dorchai (2010) provide a fully-individualised measure of income, i.e. all income sources are expressed per capita. The two authors derive from it a series of poverty indicators specific to numerous family configurations in nine countries of the European Union using the 2006 edition of EU-SILC. Their approach does capture the personal dimension of poverty. Ponthieux (2010) suggests an alternative measure, poverty in earned income, where the sources of income all relate to the state of being, or having been, in work (wages, self-employed income, sickness and unemployment benefits). Poverty in earned income means poverty of individuals 'as if' they were living on their own and only off their personal earnings. Her poverty line is the traditional Eurostat at-risk-of-poverty threshold. She then compares two ratios: the share of workers being at risk of poverty (as defined by the standard indicator) and who are also poor in earned income, as well as the share of the same in-work poor who are not poor in earned income. Adding a gender divide to her estimates, she succeeds in assessing two of the social forces impacting working poverty, low earnings and large families, in the European Union member states based on EU-SILC of 2007. In the economic literature, Allègre (2012) breaks down the equivalised disposable income into three main pieces, each representing the three major institutions impacting in-work poverty: labour market, family, and state. He reconstructs poverty indicators from individual wage income to equivalised disposable income. He derives conclusions on the standards of living inequalities of six European countries in 2007. . Mussard and Pi Alperin (2011) decompose the poverty growth by income source components (and by population subgroups) in order to avoid the underestimation of poverty growth in Scandinavian countries in 2006 and 2007.

The final choice in this paper is directly inspired from Ponthieux's concept of poverty in earned income in that the income measure we resort to is the labour income at the personal level. Individual earned income includes individual wage earnings and replacement wages. Individual wage earnings sum altogether employee cash or near-cash income, non-cash employee income, cash benefits or losses from self-employment. Replacement wages mean unemployment benefits, old-age benefits, sickness benefits and disability benefits. Only the net series of SILC income components are considered, i.e. the income net of social contributions and taxes on income<sup>3</sup>. Using labour-income at person-level, the gender paradox

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<sup>3</sup>As Ponthieux (2010) pointed it out, this may be an issue for the income measure at the person-level. The observed net income includes a possible impact of the household composition, especially on taxes. The proper adjustments to perform would require a complex micro-simulation model such

over-representing male poverty is solved in all of the four Southern European countries over all years of the sample.

To the best of our knowledge, there is no academic articles using EU-SILC microdata to compute individualised measures of poverty across countries and annually over long periods of time.

### **Income Measures Suited to the Main Dimensions of Poverty**

In the labour-market section, the goal pursued is twofold. First, it is set at sorting out the part of working poverty accruing to low-paid employment from the part of working poverty due to insufficient amount of paid work. Second, it goes beyond the proportion of people living below the poverty line by considering the income shortfalls of the working poor, known as the poverty gap. This concept developed by Sen (1976) reveals the intensity of poverty by measuring how far the income of the poor deviates from the poverty line.

In the family-related section, the goal is to appreciate the income evolution of a specific group: the share of people being poor in individual labour income but living in a non-poor household (the numerator is the headcount ratio of poverty in individual earned income; the denominator counts all households whose equivalised disposable income lies above the poverty line; both poverty thresholds are anchored in time (2008) and the statistical population include the working-age individuals spending one month a year or more in paid work).

The state-related section aims at seizing the effectiveness of income transfer schemes and policy reforms to protect working families from falling into poverty. As Sen (1976) argued that a satisfactory aggregate index of poverty should capture any income transfer among the poor, he added a third component to the poverty index he proposed: income inequality among the poor (see Box 1 on the Sen's index of poverty). The analysis of public social transfers lends itself to the use of a distribution-sensitive poverty indicator. Hence the two poverty measures considered here: the Gini coefficient of the equivalised disposable income before and after public social transfers among the working poor.

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as Euromod. Although it would yield more precise results, the option of resorting to Euromod is suggested for future investigation.

**Box 1. The Sen's Index of Poverty**

The standard measure of poverty is the poverty rate, the proportion of people living on less than the poverty line. If the poverty line is defined as a share of the national median income, then the poverty rate is a relative measure of poverty. It is to be opposed to the absolute measure of poverty where the poverty threshold is defined as a minimum of subsistence level, say \$2 a day at year n international prices. It is also called the 'headcount ratio' to distinguish it from other poverty indicators such as the poverty gap. The Sen's index of poverty combines the headcount ratio with another two rates: depth and inequality:

- **H**: the 'headcount' ratio divides  $p$ , the number of people with income  $y_i$  no higher than the poverty threshold  $Z$ , by the total population size  $n$ :

$$H = p/n$$

- **I**: poverty 'intensity' or 'depth' or the 'income-gap' ratio. The income gap  $g_i$  any individual  $i$  is the difference between the poverty line  $Z$  and his or her income  $y_i$ , expressed as a percent share of the poverty line:

$$g_i = (z - y_i) / z$$

The intensity of poverty is the weighted sum of the income-gap ratios  $g_i$  of everyone being counted as poor:

$$I = \sum_{i=1}^p g_i$$

- **Gini** is the Gini coefficient of the income distribution of the poor, ranging from 0 (perfect equality) to 1 (complete inequality). The Gini coefficient may be seen as the average (of absolute) difference of income between any two individuals randomly taken among the poor, relative to (weighted) average income of the poor Bourguignon (2012:12-13).

Sen demonstrated that for large numbers of the poor, the poverty index tends to the following limit:

$$Sen = H [I + (1 - I) Gini]$$

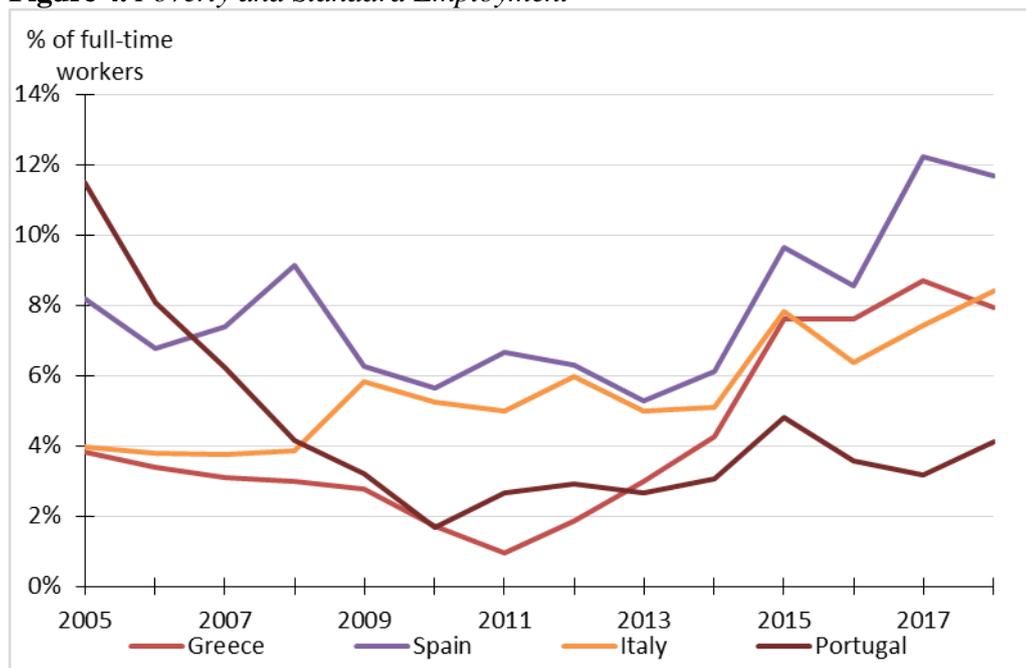
Sen's index is an increasing function in  $H$ ,  $I$  and  $Gini$ .

Why combining these three rates together? In 1976, Sen pointed that the headcount ratio as the sole poverty indicator necessarily offers an incomplete understanding of poverty and argued for a synthetic index of poverty. First, counting the number of people living under the poverty line does not say anything on how poor an individual may be: to which extent is this person's income departing from the poverty line? Providing an answer to this question, the income gap ratio makes the synthetic indicator of poverty vary in the same direction, i.e. the latter increases as a person living below the poverty line is further impoverished (monotonicity axiom). Likewise, measuring the distance between the average income of the poor and the poverty line does not capture the distribution of income among the persons living below the poverty line: how best to measure the impact of any income transfers between two persons below the poverty threshold on inequality among the poor? Sen suggested to measure inequality among the poor based on the Gini coefficient so that the synthetic index is an increasing function of the inequality indicator (transfer axiom). Overall, the Sen's index of poverty is an increasing function in its three components.

## Poverty and Standard Employment

This section lays the emphasis on the *wage* effect of the Great Recession on working poverty. Labour-market insiders typically work under regular employment contracts. Standard employment usually refers to an open-ended position in full-time employment under a permanent contract as employee. Retrieving those job characteristics in EU-SILC leads to define the poverty rate as the share of people hired on a full-time basis, all year long, whose labour income falls below the poverty threshold anchored at year 2008. The results appear in Figure 4.

**Figure 4.** *Poverty and Standard Employment*



Source: Author's Own Calculations using EU-SILC Microdata.

Note: Population of the 18-64 years-old employees working on a full-time basis all year long. Poverty thresholds anchored at year 2008 and adjusted for price inflation. The measure of income is individual earned income.

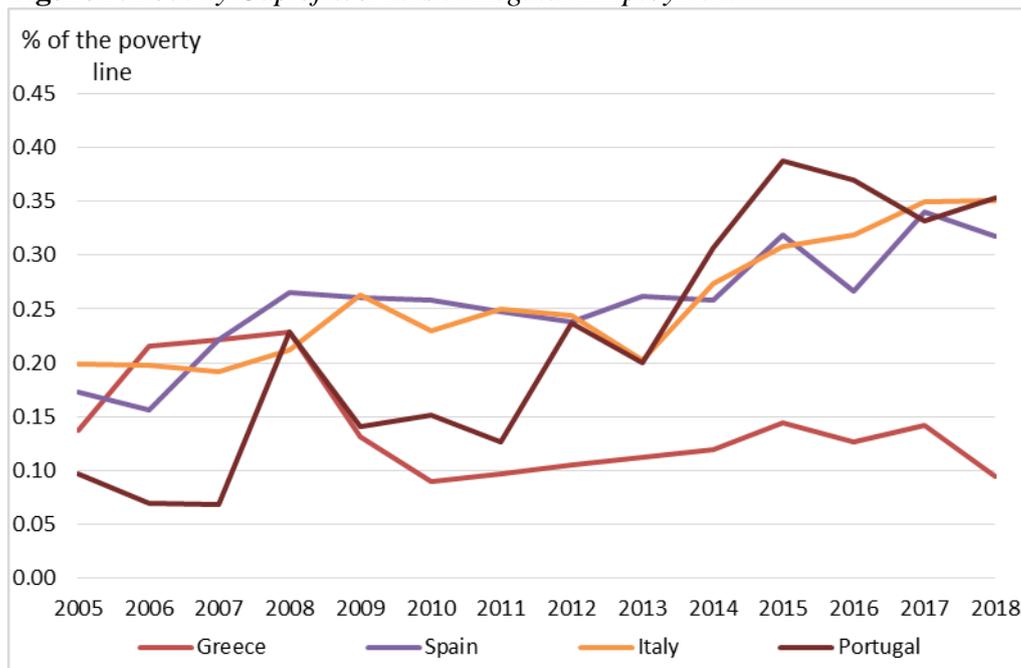
The poverty trends of workers in regular employment yield worrying results despite the extremely low rates recorded prior to the double-dip recession (less than 2% in Greece and Portugal in 2010-2011). The working poverty for the insiders has doubled in Spain, Italy, and Portugal and has been multiplied by 8% in Greece in less than a decade. Spain, Italy and Greece lie above the 8% line at the end of the period while Portugal displays a flatter slope.

Shall we conclude from these results that the Great Recession has eventually introduced a breach in the unassailable fortifications of the labour market insiders of Southern Europe? Anne Fretel (2016) analyses the concept of labour-market dualism this way: it "is read as the result of an opposition between insiders/outsideers such as theorized by Lindbeck and Snower (1988): insiders \_ supported by trade unions or labour law \_ have influence over the companies' decisions to hire or set salary levels; the power of influence in turn works against outsideers

because of the existence of turnover costs.” She pinpoints the policy implications derived from that theory. The growth rate of nominal wages has long been depicted as the primary culprit for current account imbalances, counter-performing the profit rates of firms, degrading the external competitiveness of a nation in the European context of a monetary union such as the euro zone. Wage moderation has been presented as the first-choice tool to the way out of a crisis since the 1990s (even though the IMF (2015) reckons that the “more countries undertake wage moderation together, the smaller is the competitiveness effect and the larger is the demand effect and thus the smaller the benefits and the larger the costs of wage moderation for these economies”). Two decades later, the IMF (2015) notes the decline of wages relative to productivity in crisis-hit economies of the euro zone. Wage moderation is therefore the primary explanation suggested for the sharp upward trend of poverty observed for the labour-market insiders in the four countries since 2010-2011.

How deep has the poverty gap accruing to the labour-market insiders in poverty been evolving since 2005? Figure 5 offers a glimpse of the answer by showing how far the individual earned income of the poor working full-time all year departs from the national poverty thresholds between 2005 and 2018.

**Figure 5.** *Poverty Gap of Workers in Regular Employment*



Source: Author's Own Calculations using EU-SILC Microdata.

Note: Population of the 18-64 years-old employees working on a full-time basis all year long. Poverty thresholds anchored at year 2008 and adjusted for price inflation. The measure of income is individual earned income. For cross-national comparison to be possible, we computed the relative poverty gap, which is expressed as a percentage share of the poverty line.

Whether wage earnings started to deviate away from the poverty threshold in 2010, 2012 or 2013, the wage shortfall of the poor in standard employment appears to be particularly salient in Portugal, Spain and Italy. Between the minimum and

maximum points over the period, the percentage point difference varies from 14 points in Greece to 32 points in Portugal. By contrast, the same difference in the working-age population (rather than the population of regular workers) varies from 8 to 12 percentage points.

The next two sections deal with the *employment* effect of the Great Recession on working poverty. The European Commission (2018, p. 118) clearly explains the global economic forces at play over the long-run: “Permanent full-time employment may continue to decrease in the future. While the extent of the impact of technological change and new forms of work on non-standard contracts is not yet clear, permanent full-time employment has decreased by 4 pps over last 15 years (59% in 2016)” and “the rise of new forms of employment reflects structural transformations in the world of work which have tended to lead to increasingly flexible work arrangements.” The workers in non-standard employment cannot be uniformly defined. When it refers to the self-employed, those range from the medical doctor earning high salary to the freelancer working on an Uber-type of platform hardly making ends meet. It also mixes together workers of poor educational endowments, alternating spells of inactivity with spells of unemployment or precarious jobs, with highly qualified workers, conceding to contract mini-job positions because of a job-skill mismatch that has continued for too long a period of time. In Portugal, the diversification of atypical employment has taken the form of “green receipts” (*recibos verdes*) on the rise since the late 1990s. It consists in a batch of vouchers at the disposal of the independent worker to invoice the company for services mostly delivered on site. Such a system thereby discharges the employer from all liability in terms of basic labour laws (paid leave, sickness or unemployment benefits, and so on). Affecting all skill levels, such a practice has spread to the point of becoming a common form of employment as early as 2009 with over 900,000 Portuguese workers being affected (Pernot, 2009). In Italy, the “para-subordinate” workers (*lavoratori parasubordinati*), a subcategory of self-employed workers, “are not covered by the vast bulk of employment regulations, including individual and collective dismissal legislation, maximum working hours and paid holidays regulations” (ILO, 2016). In Greece, the rise of on-call work has nurtured atypical employment. On-call work refers to casual work of an intermittent nature. Variable and unpredictable, the hours worked on-call work are generally part time (ILO, 2016). In Spain, temporary employment records the highest rates in Europe and in the world. The share of Spanish workers with fixed-term contracts in all employees remains above that of the three other countries, although the double crisis has curbed its slope below the 25% threshold since 2009 (ILO, 2016).

Usually granting only very limited social rights to their holders, these new forms of employment contracts tend to fuel the risk of poverty (COE 2015, p. 26). In this context, to which extent is the rise of non-regular employment an explanatory factor of working poverty over the past decade? To answer this question, two population subgroups highly exposed to the poverty risk are distinguished: the self-employed hiring no staff, and the part-timers who are willing and available to work more hours but who cannot for economic reasons.

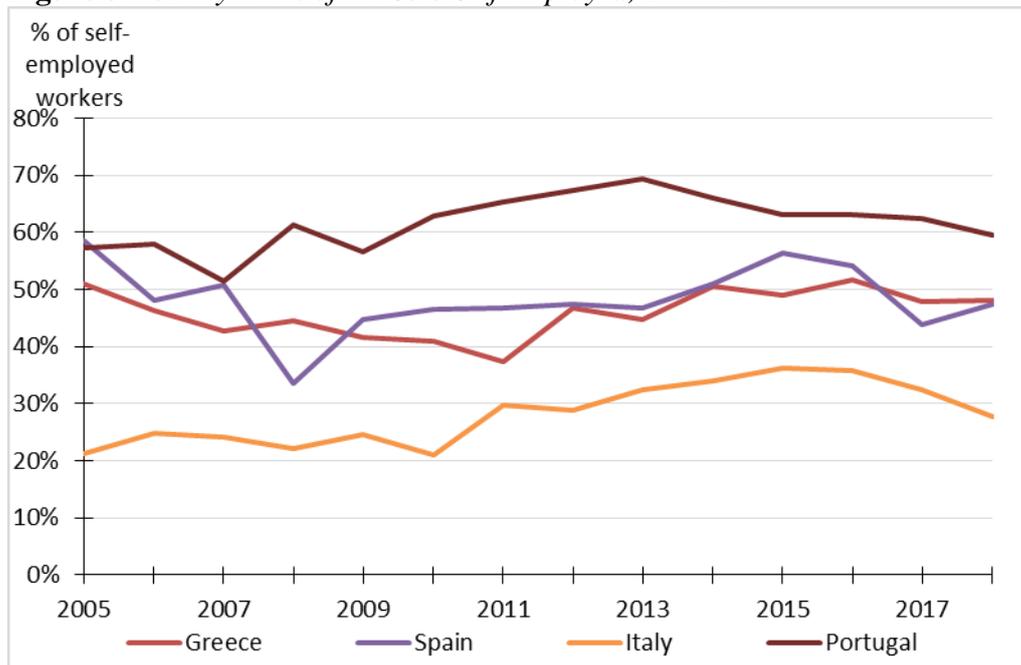
## Poverty and Self-Employment

Eurostat data online show that in 2018, the share of the self-employed was highest in Greece and Italy. “Across the EU Member States, almost one in every three people in employment in Greece was self-employed in 2018 (30%) and around one in five in Italy (22%)”.

Numerous studies link poverty and self-employment but few do so on long periods of time. McKnight et al. (2016, p. 57) summarize the situation this way: “People who are self-employed also tend to have a higher poverty risk than those working for an employer (Ray et al., 2014). Using 2007 EU-SILC data across the EU, Eurofound (2010, cited in Ray et al., 2014) find the risk of poverty among self-employed people to be three times higher than among the employed: 18 per cent compared to 6 per cent. Ponthieux (2010) adds that living with others who work lowers the poverty risk, except when both the worker him/herself and the other workers in the household are self-employed.”

According to Eurostat, the poverty risk of the self-employed in the four Southern European countries ranges between 15% and 35% between 2005 and 2018. These measures necessarily record low ranges of poverty compared to the poverty rates based on individual labour income, a poverty line anchored in time, and an extended definition of workers (Figure 6).

**Figure 6.** Poverty Rates of the Solo Self-employed, 2005-2018



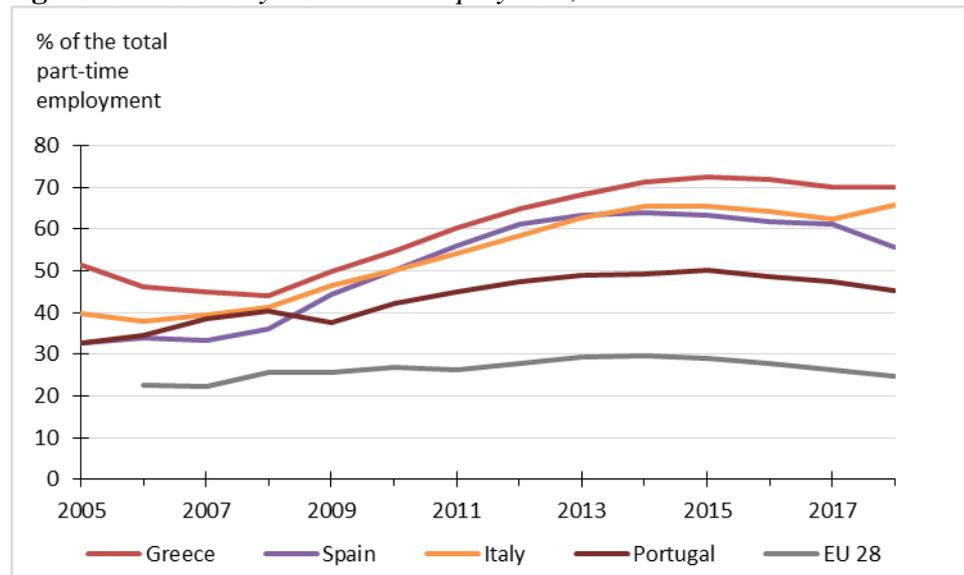
Source: Author's Own Calculations using EU-SILC Microdata.

Note: Population of the 18-64 years-old self-employed workers hiring no staff. Poverty thresholds anchored at year 2008 and adjusted for price inflation. The measure of income is individual earned income.

## Poverty and Involuntary Part-Time Employment

In the four countries of Southern Europe, involuntary part-time work in overall part-time employment lie well above the European average during the last decade. Its prevalence has spread with the onset of the double-crisis of 2008-2010 as shown in Figure 7.

**Figure 7.** *Involuntary Part-Time Employment, 2005-2018*



Source: Eurostat. LFS series - detailed annual survey results (lfsa\_eppgai).

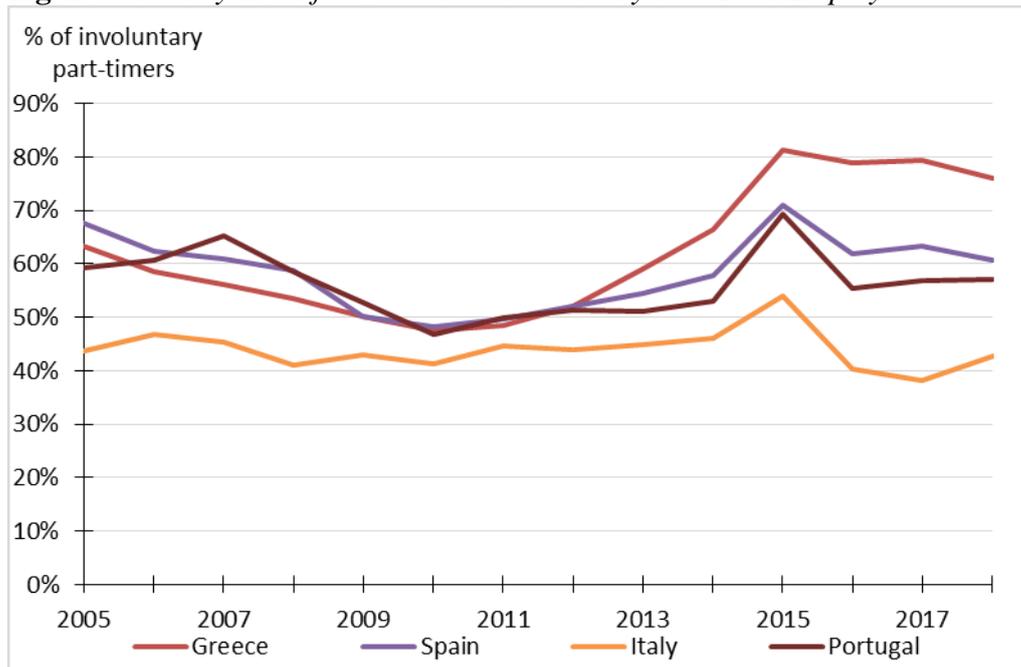
At the EU-level, Heyes and Lewis (2014, quoted in McKnight et al., 2016) associate the increase in involuntary part-time and temporary employment since the start of the crisis in 2007 to the rise in the incidence of in-work poverty across EU member states. Considering employees with a temporary contract, Eurostat records in-work national poverty rates varying within the 5%-25% interval between 2005 and 2018 in the four countries considered. Figure 8 provides a different picture with poverty rates ranging between 40% and 80% over the same time-period in the same places. It represents the share of adult persons constrained in part-time employment who would be poor (given a poverty threshold anchored in time) had they lived on their own and from their earned income only.

In Greece, one possible explanation is provided by Karakioulafis (2017). The author mentions the difficulties that an increasing number of employers face when it comes to paying the wages of their employees on time. The worker's compensation is sometimes postponed for several months in a row or being replaced by small sums of money instead. "This is one of the statistically unmeasurable and less visible faces of the casualization of working conditions" (p. 4).

These results amplify the European Commission's conclusions. At the EU-28 level from 2008 to 2016, the "rise of in-work poverty among non-standard workers underlines the challenge of ensuring that flexible labour market arrangements do not disproportionately affect the most vulnerable workers. This in turn emphasizes the need to address in-work poverty" (European Commission, 2018). The same

institution further investigates the question: “Alongside minimum wages, policy that tackles low pay more broadly, promotes continued wage and career progression, and reduces temporary contracts and involuntary part-time work is also vital. Poverty risk is especially high for workers who are part-time but looking for a full-time job, making the availability of longer hours a priority area for policy action. There is evidence that the weakening of unions in many European countries in recent decades has been damaging to the situation of lower paid workers. Governments should consider how to redress this balance” (McKnight et al., 2016, p. 112).

**Figure 8.** Poverty Rates for Workers in Involuntary Part-Time Employment

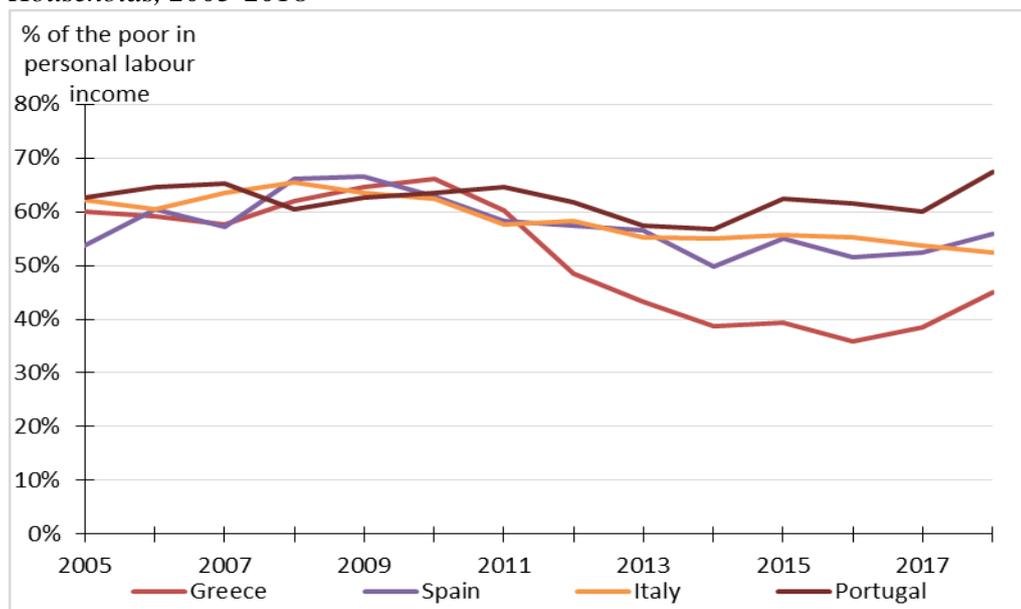


Source: Author's Own Calculations using EU-SILC Microdata.

Note: Population of the 18-64 years-old individuals constrained to part-time work. Poverty thresholds anchored at year 2008 and adjusted for price inflation. The measure of income is individual earned income.

### Poverty and Working Families

The classical argument opposed to an individual approach of poverty is that most people being poor in the individual measure of income do live in non-poor families, thereby being rescued by the family net. How many workers being poor in labour income do live in a non-poor household in the main four countries of Southern Europe between 2005 and 2018? The results appear in Figure 9.

**Figure 9.** Share of Poor in Personal Labour-income living in Non-poor Households, 2005-2018

Source: Author's Own Calculations using EU-SILC Microdata.

Note: Population of the 18-64 years-old persons spending at least one month a year at work. Poverty thresholds anchored at year 2008 and adjusted for price inflation. At the numerator, the measure of income is individual earned income expressed in current prices. At the denominator, all equivalised disposable incomes above the poverty line are considered.

The series plotted on the graph above mark a break with pre-crisis levels. First stagnating, the proportion of working adults who would fall into poverty without their family protection has been declining clearly since 2010. Put under economic pressure, the family net in Greece has rescued less than half of the working poor since 2012.

Going one step forward on this issue adds a gender component to the economic profile of the poor. Because women are over-represented in both low-paid jobs and part-time work, they “are more reliant than men on a partner’s wages to lift them out of poverty, which also makes them more vulnerable to poverty resulting from family break-up” (Ray et al., 2014). Among the working-age adults being poor in labour income and living in a non-poor household, about 70% of them were female adults in all of the four countries in 2005. However, that share has steadily decreased along a quasi-linear path since then, to finally set around 60% in all four countries from 2015 on. Despite the persistent gender divide in society, the family dimension (from its protective side) has given ground to the labour market dimension of poverty with the occurrence of the Great Recession.

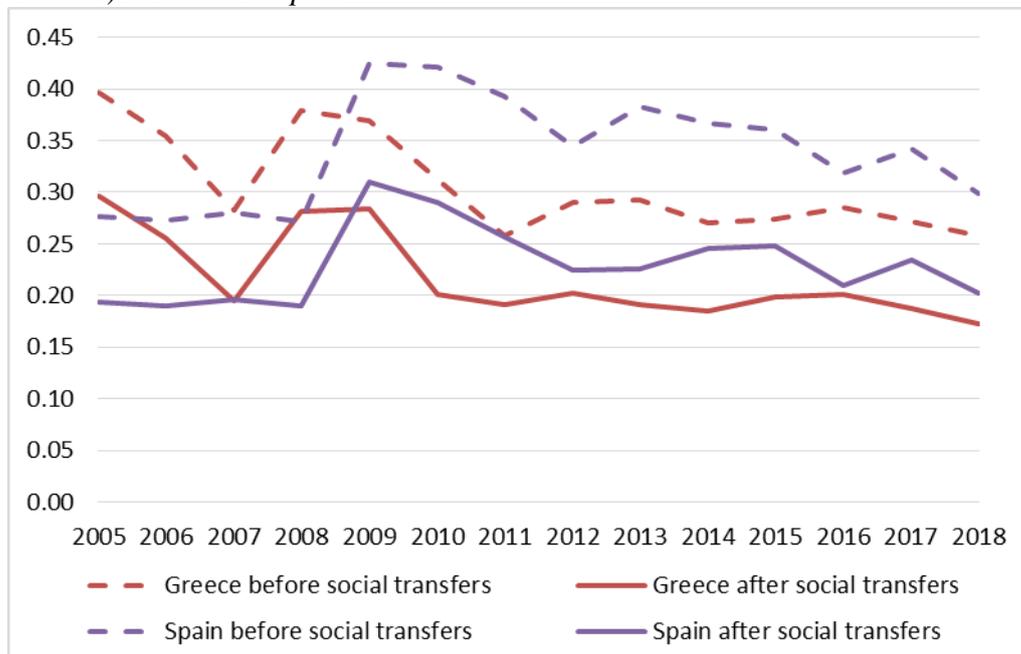
## Poverty and State

The intent of this section draws inspiration from the works by Petmesidou & Papatheodorou (2006) about the effectiveness of income transfer schemes and about the policy measures typical of the 1990s and 2000s in Southern Europe.

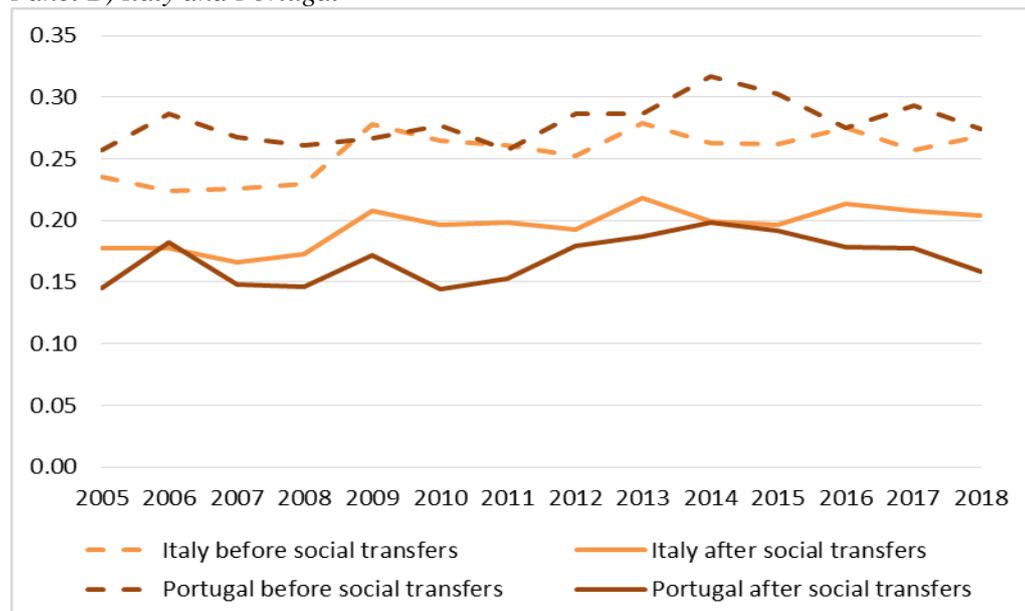
Petmesidou and Papatheodorou first sketch the institutional landscape of that time: “Overall cash transfers exhibit a strong ‘pension bias’ (a characteristic Greece shares with Italy). The few non-contributory (some of them means-tested) categorical benefits are characterized by great gaps in coverage and high fragmentation. Equally fragmented and polarized are social insurance benefits” (p. 54). The authors then compare two years, 1994 and 2001 using a series of inequality indices based on total disposable equivalent household income: the Gini index, two variants of the Atkinson index, the Theil’s Entropy Index, the mean logarithmic deviation, and another measure derived from the coefficient of variation. All of their estimates show a decline in economic inequality in the four countries between 1994 and 2001. The authors attribute this result to the introduction of progressive policy measures of the late 1990s. Indeed, the guaranteed minimum income scheme was introduced in Portugal in 1996 and implemented to the whole country a year later under the name of ‘minimum insertion income’ (Reddito Minimo di Inserimento); Spain expanded regional minimum income programmes in the meantime; and Italy initiated the social allowance, the benefit to large families or the national fund supporting low-income tenants (p. 57).

How effective have the public social transfers been to reduce economic inequality since then? One way to address the question is the computation of one inequality indicator, the Gini coefficient, measured twice, before and after public social transfers, plotted over time (Figure 10).

**Figure 10.** *Gini Coefficients of EDI before & after Social Transfers, 2005-2018*  
Panel A) Greece and Spain



Panel B) Italy and Portugal



Source: Author's Own Calculations using EU-SILC Microdata.

Note: Gini index among the working poor. Population of the 18-64 years-old persons spending at least one month a year at work. Poverty thresholds anchored at year 2008 and adjusted for price inflation. The measure of income is equivalised disposable income (EDI) before and after social transfers, both expressed in current prices.

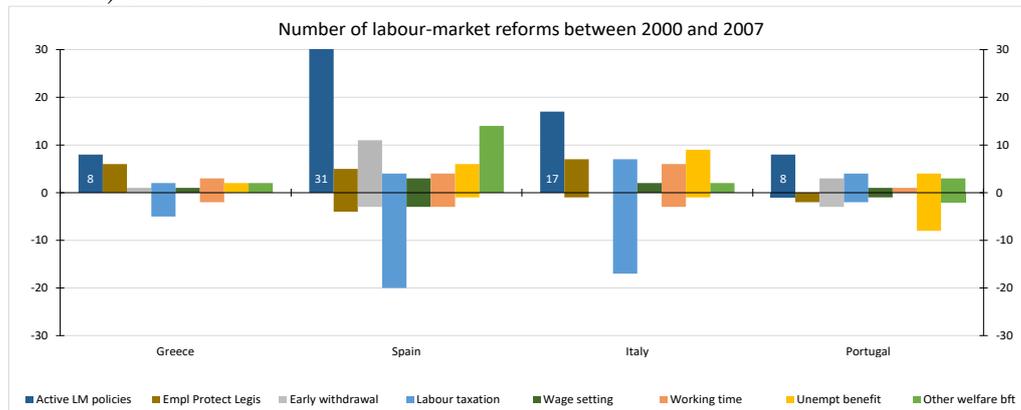
Before interpreting the results of these two graphs, let us keep in mind that the comparison with Petmesidou's and Papatheodorou's estimates is a tricky exercise. Unless otherwise stated, Petmesidou & Papatheodorou apply the inequality indices to the whole national population, whereas the two Gini coefficients presented in Figure 10 are restricted to the working poor population.

The inequality decline recorded between 1994 and 2001 in all four countries contrasts with the bumpy curves of the Gini coefficients in Greece and Spain (Panel A). The turning points of 2007-2008 and 2011-2012 make the association between the Great Recession and inequality among the working poor appear quite clearly in these two countries. In Italy overall and in Portugal up to 2014, income inequality among the poor, whether measured before or after social transfers, displays an upward trend (Panel B).

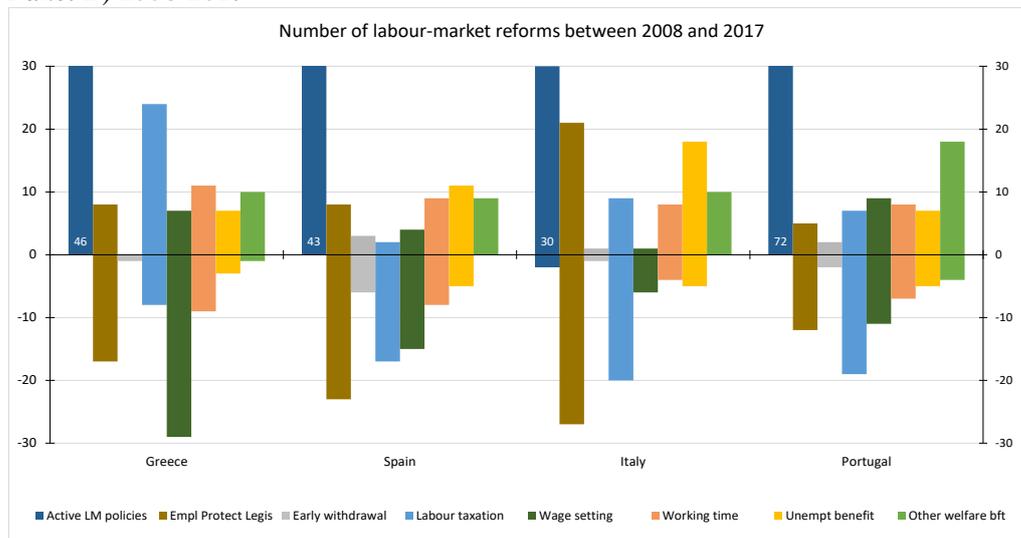
The occurrence of the Great Recession has totally changed the pace and the nature of the public policies implemented in Southern Europe, giving rise to fundamental labour market reforms. Figure 11 illustrates this point.

**Figure 11. Labour-Market Reforms before and after 2008**

Panel A) 2000-2007



Panel B) 2008-2017



Source: Labour Market Reforms Database by the European Commission (LABREF).

The labour market reforms database (LABREF) published by the European Commission (2017) tracks the number of labour-market reforms that European Union member states have implemented since 2000. Each policy measure associates a positive or negative sign with its initial goal. A positive sign means:

- in the wage setting legislation, any agreement tightening framework conditions for wage setting on the part of employers;
- in the employment protection legislation, measures increasing protection against job dismissals, restricting the conditions for the use of temporary contracts and temporary agency work, but also, measures increasing rights and working conditions of workers;
- in the welfare benefit legislation, any measure increasing the generosity of benefits or easing entitlement conditions: unemployment benefits, short-time working schemes; in-work benefits, i.e. employment conditional benefit or tax credit (workfare); social assistance (housing, means-tested benefits); sickness schemes excluding disability; family-related benefits.

Conversely, a negative sign reports “decreasing” policy measures.

All four countries actively carried out a series of reforms, "packages" of temporary and permanent measures, disentangling almost all aspects of the employment protection legislation. They devaluated collectively bargained wages from the industry-level to the firm-level in Portugal in 2009 and 2014, Spain in 2010 and 2012, Italy in 2009 and 2011. Setting wage moderation as a priority, Portugal froze the minimum wage for four years in a row (from 2011 to 2014). The social-sciences literature abounds in other examples of decreasing labour-market reforms: Vincent (2012, 2016) for Spain, Rehfeldt (2016) for the Italian case, Pernot and Rego (2014), and Rego and Pernot (2017) for Portugal, and Karakioulafis (2017) for the Hellenic republic, Chagny & Husson (2015) at the European level and Fretel (2016) for OECD countries. According to the COE (2015 a, p. 101), no strong ties can be observed between poverty trends and the labour-market reforms carried out in all Europe Union member states in the new millennium. “In the countries that only started their reforms with the crisis (Spain, Ireland, Italy, Portugal), the increase in poverty seems to be mainly due to the functioning of the labour market (employment effect and wage effect)”. Does the working poverty observed in Southern Europe in recent years take roots solely in the national labour-market structures? There are reasons to cast doubts on it. One is the state of emergency in which these policies were integrated in the national legislation. Adopted in a hurry, out of the trade-union circles, the decreasing labour-market reforms were conducted under very strong external pressures, first as a counterpart to the financial assistance provided by the European institutions and the International Monetary Fund; and second as payback for taming interest rates at sustainable levels on the financial markets, in the specific context of fiscal consolidation. Fiscal consolidation usually consists of a recessive combination of lay-offs in the public sector, and cuts in social spending on the one hand, to broader tax bases and various other tax revenue measures on the other hand. Embedding negative spillovers on economic growth, fiscal consolidation depresses employment, thereby threatening households’ disposable income. Overall, the poor and the vulnerable persons of society can hardly bear the brunt of it (Darvas & Tschekassin, 2015).

In terms of poverty, Eurofound (2017) links the fiscal consolidation policies, including labour taxation, to labour poverty (Box 2). So do Pernot and Rego (2014): “Deep budget cuts in public finances, large-scale privatization programs and deregulation of the labour market have been faithfully implemented by the Portuguese government. The overall effect of this policy on society has a heavy toll: poverty has spread, the resolution of the country's structural problems (health, education in particular) has declined. Income inequalities, traditionally high in Portugal, have been on the rise since 2010 after ten years of continuous reduction”.

Finally, if the labour-market reforms making the working poor of Southern Europe worse off since 2010 is always an arguable hypothesis, what is less disputable is the people’s perception of the crisis. Darvas & Tschekassin (2015) sum it up precisely: “According to Eurobarometer (2012), which is the sixth and most recent wave of monitoring of public perceptions on the social impact of the crisis, 80 percent of respondents think that poverty has increased in their country

over the past 12 months, while 67 percent say it has increased in the EU. The survey also suggests a growing sense of hopelessness and insecurity in a number of EU countries.”

**Box 2.** *The Effect of the Economic Crisis on Income in Greece*

Since 2009, Greece has seen a drastic reduction in minimum wages and incomes as a whole. At the same time, taxes increased for both employees and the self-employed, and social security contributions for the self-employed increased. Furthermore, a series of measures have been introduced to facilitate labour flexibility. All this has resulted in reduced incomes and spending power for workers, as well as a fall in both the average disposable income and the poverty line. Specifically, minimum wages in Greece have fallen as a result of legislation in 2012 (Law 4046) by 22% (from €751 per month to €586 per month) and by 32% for young people under 25 (to €510 per month).

The rise in flexible forms of employment (with the main effect being the conversion of full-time employment to part-time employment or job rotation) has significantly reduced income from salaries. The General Confederation of Greek Workers (GSEE) estimates that 500,000 part-time employees are paid net salaries less than the minimum unemployment benefit, which comes to €360 per month.

In terms of the taxation of employees and the self-employed, under a series of laws enacted since 2010, the tax-free threshold has been reduced, tax breaks have been abolished, indirect taxation (VAT) has been increased, and taxation of housing has been increased, all having the effect of drastically reducing income from work. For example, Law 4387/2016 reduced employees' tax-free threshold of €9,545 to €8,636. Other categories of workers (freelancers and business owners) are taxed on every euro earned. Moreover, the average social security contributions for the self-employed and freelancers increased by 20%.

Source: Eurofound (2017, p. 35).

## Conclusion

Italy, Spain, Portugal and Greece all have experienced years of economic recession, political and social turmoil in the aftermath of the sovereign debt crisis. The standard measures of poverty risk fail to capture the Great Recession over this time period in that part of the world. Three technical adjustments need to be performed to make the double crisis of 2008-2010 appear clearly: a poverty line kept stable over time, a broader definition of workers, and an individual approach to poverty. EU-SILC microdata 2005-2018 reveal that wage moderation over the past decade has acted as the primary factor of working poverty among the employees working on a full-time basis all year long, had a worker lived from labour resources only. Besides, the wage shortfall of the poor in standard employment has sharpened since the early 2010s particularly in Portugal, Spain and Italy.

The data also showed that the rise of non-regular employment boosted working poverty, from the turning point of 2010 to 2015, of two population subgroups, the self-employed adults hiring no staff, and the individuals constrained to work part-time, in much wider proportions than the standard measures usually suggest.

The share of workers being poor in individual earned income but who live in a non-poor family has decreased as the result of the economic crisis, to worrisome levels in the Hellenic republic. Bending under strong economic stress, the family net does not play as effectively as it did in the past.

Finally, the double crisis of 2008-2010 has fundamentally changed the state dimension of working poverty. Usually, the redistributive effect of the state is mainly accounted for by public social transfers. However, the welfare-related benefits, though still a key determinant for lifting people out of poverty, are no longer the primary variable featuring the state institution. “Decreasing” labour-market reforms are. The latter ones have a recessive impact on wage levels and employment duration, hurting the poor first. Combined with austerity measures as regards social transfers, they contributed to fuel income inequality among the working poor around the two turning points of 2007-2008 and 2011-2012 in Greece and Spain, up to 2014 in Portugal and over the entire time period in Italy.

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## The Lebanese Students' Awareness on the Concept of Corporate Social Responsibility

By Aline Al Am\*

*Corporate Social Responsibility (CSR) is a broad topic that covers a multitude of concepts and ideas. It has become a global phenomenon that makes use of innovative approaches for solving social, environmental and economic problems with the aim to increase the benefits for society, in general, and for the stakeholders of organizations, in particular. CSR has existed as a concept for over 70 years. Although CSR is mainly promoted by large companies, mainly multinational enterprises, it is also important for other types of organizations such as universities. Its wider application towards universities is of central importance, since universities are the greatest contributors for the formation of forthcoming entrepreneurs, business leaders, managers and employees. (Wright T, 2010). In Lebanon, there is a consistent need for the community to live in a safe, clean and healthy environment. Despite many efforts on behalf of sustainability and social responsibility in Lebanon, most social and environmental trends have not been effective. Therefore, universities should be presently open to promote a sustainable growth strategy. The implementation of CSR initiatives in the universities will contribute towards awareness raising and dissemination of the concept. This research's main aim is to investigate the level of CSR awareness in the Lebanese society then to identify the role of universities in promoting CSR among the future generations. (JEL M14, Q01, I23, O53)*

**Keywords:** Corporate Social Responsibility, Universities, Lebanon, Sustainable Development, Students.

### - Introduction

Everywhere, companies are struggling to fulfill a new role, which is to meet the needs of the present generation without compromising the ability of the next generations to meet their own needs. Organizations are being called upon to take responsibility for the ways their operations influence societies and the natural environment. Globalization has increased the awareness of businesses regarding their responsibility toward the development of society and CSR is widely accepted as an appropriate commitment to ensure sustainable benefit for both corporations and communities.

As organizations do not operate in vacuum, their activities will impact their environments which include their stakeholders, society, and other influenced parties. We can argue that the responsibility of addressing global issues ideally involves everyone, since everyone is in some way impacted. Everyone should strive for a sustainable tomorrow. Unquestionably, all humans have moral obligations to preserve the planet and there is no excuse for not doing something to improve the environmental state of the globe.

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This also applies to institutions of higher education. Universities, as the centers of knowledge generation and sharing, play a very important role in solving world's problems by creating a sustainable future. Education could play a key role in helping communities to adopt principles of sustainable development. They play a major role in spreading CSR principles in the mind of students in order to build a responsible society, aware about the importance of sustainability. Universities are the best contributors for the formation of future entrepreneurs, business leaders, managers and employees. Environmentally responsible citizens accept responsibility for what happens in their community-not only environmentally but also politically and socio economically.

Sustainability issues and CSR should be integrated within the main program and activities of university education and research processes, different operational activities of the university and its community as well as the relations of the university with the external community. Every institution of higher education, including students, teachers, researchers, administration and other staff, has to follow sustainable development principles.

However the question is to discover:

To what extent the universities are playing a role in promoting CSR and what is the level of CSR awareness in the Lebanese Society?

To answer this, the study seeks to look more in depth onto the social roles and responsibilities of the Lebanese universities by studying the integration of CSR in the teaching programs and activities of the universities and this can be achieved by studying and exploring the role played by those universities in creating CSR awareness in the Lebanese society.

### **Corporate Social Responsibility: Concept, Evolution and Practices**

Corporate social responsibility (CSR) is the intentional application of sustainable development by the companies which means that they incorporate in their activities the three pillars of sustainable development: economy, society and the environment by taking into account the expectations of stakeholders. Corporate Social Responsibility is an emerging field which has gathered bigger attention recently, business and academic researchers have shown increasing levels of interest in CSR during recent years.

#### *An Overview of CSR*

CSR is about businesses and other organizations going beyond the legal obligations to manage ethically the impact they have on the environment and society. In particular, this could include how organizations interact with their employees, suppliers, customers, and the communities in which they operate, as well as the extent to which they attempt to protect the environment. While the development of a society depends on the businesses that succeed in its environment, the success of a business also depends on the stability of that society. The well-being of one depends directly on the well-being of the other. Thus,

corporations need to understand and redefine their roles in order to fulfill their social responsibilities. They need to look beyond government-initiated development programs and take charge of directing initiatives aimed towards improving the health and standard of living of their community. Businesses that integrate social responsibility into their missions acknowledge that their business processes have an impact beyond the company.

**Table 1.** *Definitions of CSR (own elaboration)*

Author	Year	Definition
Bowen	1953	CSR refers to the obligation for entrepreneurs to implement strategies, to take decisions and to guarantee practices that are compatible with the objectives and values of the community in general. (Bowen, 1953)
Davis	1960	CSR is the set of decisions taken for reasons that exceed the economic or technical interest of the firm. (Davis, 1960)
McGuire	1963	CSR assumes that the company does not only have legal or economic obligations, but also has responsibilities to society that go beyond those obligations. (McGuire, 1963)
Friedman	1970	CSR is to use its resources and engage in activities designed to increase its profits. (Friedman, 1970)
Carroll	1979	CSR encompasses all the economic, legal, ethical, and discretionary expectations that society expects from its organizations. (Carroll, 1979)
Wartick and Cochran	1985	CSR is the underlying intersection between the principles of social responsibility, the process of social sensitivity and the policies implemented to deal with social problems. (Wartick, S. and Cochran, P., 1985)
Wood	1991	CSR is the intersection of three principles: legitimacy, public responsibility and managerial discretion. These result from three levels of analysis, institutional, organizational and individual. (Wood, 1991)
Clarkson	1995	CSR is the ability to manage and satisfy the various stakeholders of the company. (Clarkson, 1995)
World business council for sustainable development	2000	CSR is the commitment of business to behave ethically and to contribute to economic development while improving the quality of life of the workforce and their families as well as the local community and society at large. (WBCSD, 2000)
Commission of the European Communities	2001	A concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment. (CEC, 2001)
Kakabadse	2005	The basic idea of corporate social responsibility is that business and society are interwoven rather than distinct entities. (Kakabadse, 2005)

CSR means different things to different people, there are varied views on what CSR is and what it is not. Although it had become a slogan, CSR is more often misunderstood as giving back to the society and considered to be identical to philanthropy. The dominant school of thought is that CSR is no philanthropic activity and a business must earn for what it invests. Corporate Social Responsibility is confused with corporate philanthropy or charity, but it is a very different thing. Corporate philanthropy has a more restricted scope than CSR; it refers primarily to donations made to charitable and non-profit groups, whether by the corporation, its employees or both. CSR not only deals with corporate philanthropy but also with further concerns that affect the environment, consumers, human rights, supply-chain sustainability and transparency for the greater good of the world at large. It should address how to be a good citizen in the community; CSR is about the organization's obligations to all stakeholders and not just shareholders. Organizations must manage and plan relationships with their stakeholders. The stakeholders are the ones with vested interests in the organization, and those who can influence its way of doing business and thus future opportunities to succeed.

There are a large number of definitions for CSR. However, the recurrent theme of these definitions regards an organization's defined responsibilities to its communities and its environment. These are some of the most important definitions of CSR.

#### *The Pyramid of Corporate Social Responsibility*

Viewing CSR from Carroll's pyramid, we can say that the concept presents four dimensions: economic, legal, ethical and philanthropic; and this can be illustrated in a pyramid as presented in figure 1. Carroll contends that all of these responsibilities have always existed to some degree, but ethical and philanthropic responsibilities have become significant only in recent years.

- **Economic Responsibilities:** "Be profitable, Maximize sales & Minimize costs."

Economic responsibilities relate to business's provision of goods and services in society. Profits result from this activity and are necessary for any other responsibilities to be carried out. It is assumed that corporations will be as profitable as possible, maintain a strong competitive position and maintain a high level of operating efficiency. It is well known that many developing countries suffer from a shortage of foreign direct investment, as well as from high unemployment level and widespread poverty. It is no surprise, therefore, that the economic contribution of companies in developing countries is highly prized, by governments and communities alike. Fox (2004) argues that this should not be seen in negative light, but rather as a more development-oriented approach to CSR that focuses on the enabling environment for responsible business in developing countries and that brings economic and equity aspects of sustainable development to the forefront of the agenda.

- **Legal Responsibilities:** “Obey laws and Regulations.”

The society expects businesses to conform to laws and regulations. Corporations are expected to pursue profits within the framework of the law, which establishes what are considered as fair operations. The society expects that all goods and services and relationships with stakeholders should meet at least minimal legal requirements. This does not necessarily mean that companies flaunt the law, but there is far less pressure for good conduct. This is because; in many developing countries the legal infrastructure is poorly developed and often lacks independence, resources and administrative efficiency.

- **Ethical Responsibilities:** “Do what is right, fair and just.”

This includes those activities that are not expected or prohibited by society as economic or legal responsibilities. Standards, norms or expectations that reflect concern for selected stakeholders input is fair, just, or in keeping with their moral rights. Ethics or values may be reflected in laws or regulations, but ethical responsibilities are seen as embracing the emerging values and norms that society expects of business even if not currently required by law. These responsibilities are more difficult for businesses to deal with as they are often ill-defined or under continual public debate. Ethical responsibilities are also found in the fundamental ethical principles of moral philosophy, such as justice, human rights and utilitarianism, the changing or emerging ethical responsibilities are constantly pushing legal responsibilities to broaden mere compliance with laws and regulations.

- **Philanthropic Responsibilities**

It involves being a good corporate citizen and including active participation in acts or programs to promote human welfare or goodwill. Examples are contributions to the arts, charities and education. Such responsibilities are not expected in an ethical or moral sense, making philanthropy more discretionary or voluntary on the part of business even though society may have such expectations of business. Few in society expect corporations to have these responsibilities and they can be thought of as things corporations “might do”. Companies realize that they cannot succeed in societies that fail, and philanthropy is seen as the most direct way to improve the prospects of the communities in which their businesses operate.

In summary Carroll’s views the total social responsibility of business as involving the simultaneous fulfillment of the four responsibilities which are stated in pragmatic terms, meaning that the corporation should strive to make a profit, obey the law, be ethical and be a good corporate citizen.

**Figure 1.** *The Pyramid of Corporate Social Responsibility (Carroll, 1991)*

- *History and Evolution of the CSR Concept*

The arrival of CSR in academic literature has a long history. CSR was first mentioned in monographs in 1926 by Clark (Clark, 1926) who notes that a business has obligations to society. Other early monographs include Barnard (Barnard, 1938) and Kreps (Kreps, 1940) who look to the inclusion of social responsibilities within the obligations of business. With Howard Bowen, CSR becomes the object of significant academic interest as he published the famous book "Social Responsibilities of the Businessman" in 1953 and he is considered to be the founding father of CSR.

The 1960s saw CSR as continuing to struggle for definition. Different authors provided specific reflections. A large evolution has been recorded. Despite this evolution, many continued to focus on the economic returns to shareholders, recognizing that CSR could advance the self-image of the corporation. Drucker in 1984 proposes a new meaning for CSR giving a role to the Third Sector and focusing on the possibility to transform social responsibilities in business opportunities (Drucker, 1984). The 90's were also very rich in this concern especially in extending the concept to complementary ones such as corporate social performance, ethics in business and corporate social responsiveness. In the last decades the CSR concept has been enriched in different theories of the firm: stakeholder theory, institutional theory and resource based view.

All the definitions of CSR provided throughout the years can be divided into two different categories. Phillip Kotler and Nancy Lee (Kotler, P. and Nancy, L., 2005) refer to these two categories as the "traditional approach" and the "new approach". This division is established on the main idea that companies' view of CSR has developed from being seen as fulfilling an obligation to be seen as a strategic tool.

The traditional approach mainly covers definitions prior to the 1990s when CSR was seen as an obligation. Basically, this approach was followed for a long time, till recently, and the companies following this approach apply CSR only

because it would raise their recognition in the market. They did not practice these activities because of the interest in the well-being of the society. The only reason behind it was to form their corporate image. Commitments were short term, allowing the organization to spread the wealth over a variety of organizations and issues throughout the years. Companies taking this approach simply engage in CSR to look good, and allocate money to many organizations, believing that this creates the most visible effort. The initiatives are not supporting the company's strategic business goals but reflecting the wishes and preferences of the management of the company often resulting in a short-term commitment.

The new approach arose in the 1990s when the conception of CSR changed from being seen as obligatory to be viewed as a strategic tool that can support a company's activities and by this mean positively affect a company's image and reputation. . It supports corporate objectives as well. This is a win-win situation for all because when a particular company does well to the society honestly and for a cause, it has to be good, and along with this process, it succeeds in building a good name. This shift is also evident in the CSR definitions that take point of departure in this approach. (Kotler, P. and Nancy, L., 2005)

Since entering into the twenty-first century, more focus has been given to implementation of CSR initiatives and empirical study of CSR impacts.

The following table shows some areas of focus a business can look at for its CSR projects and strategies:

**Table 2.** *Internal & External CSR strategies (Own elaboration)*

	<b>Fields</b>	<b>Activities</b>	<b>Results</b>
<b>External</b>	<b>Environment</b>	Reduce consumption of energy, water & other natural resources Use or produce recycled and recyclable materials Use 'green' power electricity suppliers Join or start a 'green business' club	Reduced pollution
	<b>Market</b>	Excellent service delivery Customers education Buy from local suppliers and strive to hire locally	Customers satisfaction Word of mouth
	<b>Society</b>	Support organizations that promote fair trade and human rights compliance Use some of the marketing budget to associate the business or brand with a social cause	Relationship with local community Recognition by stakeholders

<b>Internal</b>	<b>Product</b>	Use organic or natural ingredients in production High quality products Make some products or services free or at cost to charities	Business reputation Publicity
	<b>Employees</b>	Be open to job splitting, flex-time and other work-life balance policies Involve employees in business decisions that affect them Fair wages and salaries Employee wellness programs Encourage employee volunteering	Low staff turnover Motivated employees Reduced rate of absenteeism High staff morale Increased productivity Increased company engagement
	<b>Organization</b>	Establish policies to ensure the health and safety of all employees Commit to an external standard that provides a framework to measure progress on environmental and social issues Make sure to have explicit policies against termination of any employee on the basis of gender, race, religion and others	New business opportunities Sustainability

### The Higher Education Sector in Lebanon

Lebanon's higher education sector is the oldest in the region. It was established in 1866 with the foundation of the American University of Beirut (AUB) followed by the University of Saint Joseph (USJ) in 1875, then by the Lebanese American University (LAU) in 1947 as the Beirut College for Women. The only public university established in the country, the Lebanese University (LU), was founded in 1951. Haigazian University was founded in 1955, followed by the Beirut Arab University (BAU) in 1960 operating in collaboration with the Egyptian university of Alexandria. Most of the higher education institutions currently in operation in Lebanon were certified in the late nineties when the private sector prospered in an unexpected and rapid expansion following the 15 year civil war that Lebanon suffered between 1975 and 1990 and which had a very negative impact on the country's higher education sector.

The freedom and independence of Lebanese higher education are protected under the Constitution. The Lebanese University (LU) enjoys clear autonomy with

its own system of governance. Despite the fact that the Faculties of the Lebanese University have many branches spread all over the country, the responsibility of managing the Faculties is in the hands of the Deans, and the management of the university is in the hands of the University Council. The private sector is governed by the law of 1960. In 2002, a Directorate General for Higher Education (DGHE) was established to regulate the private higher education sector, and supervise and coordinate all actions related to it. The DGHE is in charge of the private higher education institutions currently in operation in the country. Apart from the licensing and the validation of the degrees and disciplines offered by the Institution which must be validated by the DGHE, all other responsibilities are in the hands of each institution's governing body.

Concerning the systems adopted in the higher education sector, the two oldest universities, the American University of Beirut and the "Université Saint Joseph", adopt the American and French systems respectively. The old yearly based French system has been changed in almost all the universities to the European 3-cycle system; Bachelor-Masters-Doctoral (BMD) system. The two major systems in Lebanon are the American and European ones and almost all of the higher education institutions adopt a form of 3-cycles credit-based system. However, some variations exist since some universities adopt the Canadian system, others the German system and the Beirut Arab University adopts the Egyptian–Arab system.

As for the system in general, the credits systems also vary from one institution to another. There is no national credit system that allows the transfer, recognition and mobility of the students. The two major classes of credits' systems are: the American Credit system and the European Credit Transfer and Accumulation system (ECTS). The American credits are roughly based on contact-hours. The ECTS is student-centered and accounts the relative workload of the student in average.

The organization of the research activities are also done by the institutions solely. At the national level, the National Council for Scientific Research offers some financial support to reviewed research projects. It also defines and supports associated research units. At the institutional level, several universities have established structures to encourage and promote the research activities. Moreover, the Lebanese researchers participate to some regional and international projects. It is worth noting that often the professors and active researchers at the Lebanese higher education institutions have maintained their contacts and cooperation with the research units they have visited during their PhD preparation.

International cooperation is another dimension of the Lebanese higher education. The Lebanese higher education has been and still remains attractive for a significant set of students from the region. Besides, several Lebanese universities have opened branches in the Gulf region. At the international level, the Lebanese universities have well established cooperation with foreign universities abroad. At the educational level, the Lebanese universities in general participate actively in Tempus and Erasmus Mundus projects. At the research level, the Lebanese universities participate in EU (FP6, FP7) projects as well as several USAID projects. CEDRE program has also been supporting research cooperation between

Lebanon and France. Several other cooperation programs exist. However, there are no clear policies regarding the organization and development of the international dimension in the Lebanese Higher Education.

When it comes to the distribution of students by gender, it can be observed that the proportion of female students exceeds the proportion of males by eight percentage points, with females accounting for 54% of students and males constituting the remaining 46%. As for the nationality of students in higher education, the majority are Lebanese (86% share), while non-Lebanese account for 14% of students.

Concerning the distribution by major, we can say that the statistics done during the academic year 2011-2012 are still significant with small variations. Almost 27% of students were enrolled in Business and Economics majors. Literature and Humanities (Language, Translation, History, Philosophy..) accounted for 14.8% of total students. Whereas 11.7% of students majored in Engineering (Architecture, Civil, Mechanical, Electrical, Agricultural, Interior, Landscape...) and 9.1% of students majored in Natural Sciences (Physics, Chemistry, Biology..) and Mathematics. Law major ranks sixth in popularity with a 5.5% of total higher education students, followed by Pharmacy, Nursing, and Laboratory (3.9%), as well as Media, Press, and Advertising (3.5%). Lastly come Medicine, Education, and Teaching with 2.9% and 1.9% of total students, respectively.

## **Methodology and Findings**

This section presents the research methodology or the design of the research while stating respectively the research objective, the defended thesis, the hypotheses, the epistemological positioning and the followed approach.

The problematic answers the question "what am I looking for?" In this research the research question, referred to in the introduction is:

To what extent the universities are playing a role in promoting CSR and what is the level of CSR awareness in the Lebanese Society?

To answer this question, the study will first focus on the degree of integration of CSR into the universities' teaching programs and activities and finally the goal is to discover whether this integration can affect the behavior of their students in order to measure the level of CSR awareness in the Lebanese society.

Thus, the research question is aimed at finding a positive relationship between two variables - the integration of CSR in Universities and the creation of student awareness about the subject.

The hypotheses to be tested in this research are:

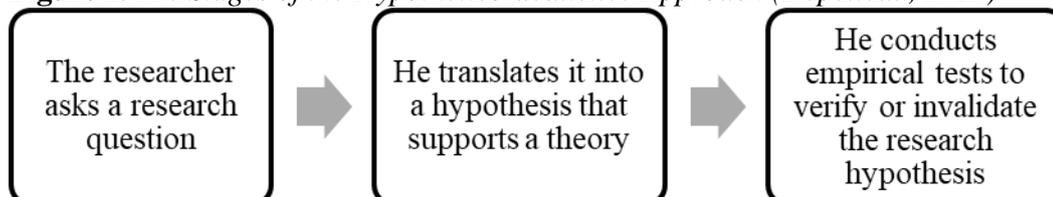
H1: Education provides the basics for people's mind development resulting in accepting the change toward the best behavior.

H2: The teaching courses in Universities programs related to CSR and sustainability influence students' behavior toward sustainability in order to create agents of change in society

H3: The universities engagement into sustainable activities influences students' behavior toward sustainability

This research is situated in the positivist paradigm where reality is given objectively and is independent of the observer. In this case, the research follows a hypothetical-deductive approach illustrated in the figure below:

**Figure 2.** *The Stages of the Hypothetico-deductive Approach (Depelteau, 2010)*



The questionnaire is a tool used to collect information in order to understand and explain realities. By nature, the questions of the questionnaire can be open, closed or mixed. In this research, we adopted only closed questions. As we know, the closed questions can be either dichotomous which means that they come with two modalities of response or polyatomic, that is to say, with several modalities of response. The closed questions present some advantages which increase their use: the collection of the answers is simple, the coding of the information is immediate, the information collected is uniform and in some cases the closed-ended questions provoke reflection. The disadvantages found in such type of questions are related to the fact that the answers do not provide an indication of whether the questions were understood or not and in some cases they do not express the exact answer that the respondent wants to provide.

The method of administering the questionnaire will differ, concerning the presentation of the questions to the interviewees; we can distinguish two types of administration: in the first type the questionnaire is explained by the interviewer and it is distributed face to face or by a telephone call and in the second type the questionnaire is self-administered by making it available to the public using several techniques of which the two most dominant are mailing and posting on the Internet. In this research, we sent the questionnaire by email in order to reach as many persons as possible and to collect the data quickly. This mode of administration doesn't need a budget; it is fast and provides good quality data.

The questionnaire used in this research is divided in two parts; the first one is related to general information needed to discover the population in the study while the second part composed of 16 questions is more specific. The questions of part 2 focus on discovering the importance of CSR provided by the universities, some questions of the questionnaire are related to the practices, activities or the courses associated to CSR implemented by the university, while other questions are oriented toward understanding the role played by university in promoting CSR and to discover how a university can play the role of an agent of change in the society. The answers of most of the questions follow the Likert scale while the question related to the awareness is binary. The collected data is analyzed using "SPSS" software.

The study has focused on some of the top universities located in Lebanon mainly the Lebanese University, Balamand, USJ, USEK, CNAM and NDU taking into consideration their different branches in order to cover most of the Lebanese regions. The sample is composed of 207 respondents divided into 99 male and 108 female. 90 of the respondents are students of the Lebanese university while 117 are from the different private universities. The answers come from different regions of Lebanon as follows: 18 from Beyrouth, 72 from the North of Lebanon, 54 from the South, 27 from Bekaa and 36 from Mount Lebanon.

We have randomly selected a certain number of students from different specializations at the universities mentioned before. The sample includes 18 students of Business and Economics, 36 students of Literature and Social Sciences, 36 students of Engineering and Architecture, 81 students of Medicine, 18 students of Law and Political Sciences, 9 students of Sciences and 9 students of Arts and Music. The selected students are in different academic years.

The study shows that around 70% of students are not aware about the importance of CSR while 30% are aware. The level of awareness is higher in the private universities comparing to the Lebanese University (public). This is due to the different activities organized on the campus of the private universities. Most of the activities covered are related to the protection of the environment.

The AUB and LAU have boosted PRO-GREEN-A Joint/Dual Professional Degree in Green Technologies offering a diploma in green technologies intended for those already working in the fields of engineering and architecture. The program offers opportunities to focus on sustainability in energy, water and buildings. PROGREEN can be completed on the internet, making it the first professional diploma of its kind in the region. The study program comprises 55 courses and 87 credit hours. Environmental concerns are also at the heart of the University of Balamand. Accordingly the university decided to set up an Institute of the Environment (IOE) in order to address ecological worries through both research and activity.

MAJAL, the Academic Urban Observatory, launched in 2008 the project entitled "Promoting Sustainable Construction in Lebanese Universities" dedicated to bringing issues to light on particular sustainable development strategies.

In addition, the "Reorient Curricula to Address Sustainability" (RUCAS) project was launched in October 2010. Its main goal is to help six partners in Lebanon, Jordan and Egypt to set in Environmental Sustainable Development into their curricula and teaching methodology through capacity building of university staff. Among these universities are the NDU and Sagesse University. Many other universities have their own initiatives along with the community. We have just presented a general idea of what is being done by the Lebanese Universities in order to build a better society looking for economic prosperity while keeping planet resources viable for future use.

The research demonstrates that the respondents are looking to CSR as environmental concerns only and missing the social concerns.

After collecting the data via the questionnaire, we used the correlation in order to verify H1. The correlation is useful when we want to study the relationship between two or more variables. In our case we find opportune to study the

relationship between the level of education and the engagement in different activities revealing the awareness on CSR in the mind of students like volunteering, being aware of pollution, reducing consumption, using renewable energy, waste sorting, and consuming organic food. A correlation coefficient is a statistical measure of the degree to which changes to the value of one variable predict change to the value of another. In positively correlated variables, the values increase or decrease in tandem. In negatively correlated variables, the value of one variable increases as the value of the other decreases.

Table 3 shows this relationship. We can deduce that the level of education doesn't have any impact on any of the chosen variables (volunteering, awareness of pollution, reducing consumption, use of renewable energy, waste sorting and consumption of organic food). ( $\text{sig} > 0.05$ ). This result can be probably explained by the absence of teaching courses related to CSR given to the students in their academic study.

In this case H1 is rejected; the variable "years of education" by itself doesn't have any impact on CSR practices. For this reason the research is oriented to study the impact of the teaching courses on CSR given by the university on changing the mind of the students.

**Table 3.** Correlation between Level of Education and the Different Activities

		Renewable Energy	Waste Sorting	Organic Food	Level of Education
Level of Education	Pearson Correlation	-.173**	.431*	-.102**	1*
	Sig. (2-tailed)	.113	.071	.142	
	N	207	207	207	207

\*\* . Correlation is significant at the 0.01 level (2-tailed)

\* . Correlation is significant at the 0.05 level (2-tailed)

Table 4 illustrates the correlation between the number of CSR courses taken by the students and the achieved implementation of different activities. We can deduce that the number of courses related to CSR given by the university to the students has a positive impact respectively on the awareness on pollution, reducing consumption and choosing organic food. Regarding the other variables where there is no impact ( $\text{sig} > 0.05$ ) the behavior of the students can be explained in different ways.

We realize that the students of the final years are focusing on searching for their first job and therefore are not interested in volunteering, while for reducing the consumption and using the renewable energy the research shows that the teaching courses are not focusing on these two variables as well as the other areas of CSR.

In this case H2 is confirmed for the reasons explained above even though not all the variables have positive correlation. The teaching courses play a major role in spreading awareness on CSR. Since we have a considerable deficiency in the awareness of CSR concept and strategies, the programs should cover all areas of CSR. Students must have a better idea of the different CSR strategies and must clearly distinguish between CSR and Sustainability.

Universities assume a special role in promoting a collective strategy for growth on a sustainable basis, through the development of an adequate educational offer and scientific research, in the scope of corporate social responsibility and sustainable development. There are many ways in which universities can get involved in CSR and sustainable practices like: education, research, management, planning development, purchasing, transportation, construction, renovation, and community service.

**Table 4.** Correlation between the Number of Courses and the Different Activities

		Nbcourses	Volunteering	Aware Pollution	Reducing consumption
Nbcourses	Pearson Correlation	1	.213**	.207**	.040
	Sig. (2-tailed)		.202	.003	.568
	N	207	207	207	207
			Renewable Energy	Waste Sorting	Organic Food
Nbcourses	Pearson Correlation		.044	.144**	.132**
	Sig. (2-tailed)		.533	.039	.008
	N		207	207	207

\*\* . Correlation is significant at the 0.01 level (2-tailed)

\*. Correlation is significant at the 0.05 level (2-tailed)

In order to verify H3, we used the logistic regression illustrated in table 5. It is known that the Logistic regression is a class of regression where the independent variable is used to predict the dependent variable. In our case the independent variables are: the campaigns organized by the university, activities aimed to reduce consumption, the use of renewable energy, the waste sorting and the dependent variable is the awareness of students on CSR leading to change in their behavior toward sustainability.

The results show that the campaigns, the use of renewable energy and the waste sorting have a significant impact on the awareness of students ( $\text{sig} < 0.05$ ) while reducing the consumption doesn't have any impact. Possibly the university is working on reducing consumption but the students of the studied sample are not aware about the activities achieved by the university in this field. We can conclude that H3 is partially confirmed since three activities out of four have significant impact.

**Table 5.** Logistic Regression

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 <sup>a</sup>	Campaigns	-2.696	.507	28.224	1	.000	.067
	Reducing consumption	-1.051	.716	2.155	1	.142	.350
	Renewable Energy	-2.888	.531	29.604	1	.000	.056
	Waste Sorting	-3.291	.771	18.209	1	.000	.037
	Constant	5.259	1.067	24.279	1	.000	192.280

Variable(s) entered on step 1: Campaigns, Reducing consumption, Renewable Energy, Waste Sorting

## **Conclusion and Recommendations**

In Lebanon, we have a consistent need to implement CSR and sustainable practices in the overall society. The ranking of Lebanon regarding transparency worldwide is embarrassing. The solution may come from the new generation. The main responsibility of institutions of higher education is to prepare their students through increasing the awareness on CSR, knowledge, skills and values needed to create a sustainable future. Universities are key players in promoting new dynamics at institutional and social networks. They have a double role, first, to improve the students' quality of life on a sustainable basis and second to educate with values oriented toward social and human values.

CSR practices should be integrated within the main functions of a university: education and research processes, different operational activities of the university and its community as well as the relations of the university with the external community. All the members of higher education including students, teachers, researchers, administration and other staff, have to implement CSR and sustainable development principles.

The main results of this research can be resumed as follow:

- The more universities integrate CSR practices in their teaching programs the more students are aware about its importance and are driven by sustainable thinking
- The organization of activities by the different universities can have more influence on students' behavior
- The level of education may have a positive impact if complemented by teaching courses and activities related to CSR

Every research has its own limits. In this case the random selection of the sample and the number of the respondents might have not been optimally representative. The study was oriented to the environmental concerns of CSR without taking into consideration the social concerns like: human rights, labor practices, organizational governance...

In order to better address the issue of CSR awareness among university students, the following suggestions are to be taken into consideration by the different universities:

- Enrich the programs in the different faculties by teaching courses on the CSR concept and practices
- Suggest ways in which the institution might go "beyond the campus" into the community
- Undertake more initiatives as the students would do the same when they see that their universities are committed to the mission and not implementing CSR to show-off
- Encourage students participation and empower them to give ideas through brainstorming and decision making

Universities in developing countries like Lebanon should consider the world leading universities as their benchmark not only in academic areas as they are doing but also in issues of social responsibility and sustainability.

Future research must be oriented to assess how the promotion and implementation of CSR at Universities will reinforce the credibility of such organizations and basically to cover the other areas of CSR missing in this study. It is also fundamental to help to introduce sustainable development principles in all areas of universities activities in order to assure reasonable use of resources, education content and process based on sustainable development.

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## **The Influence of Employee Self-efficacy, Outcome Expectation and Firm Resources on Intrapreneurial Behaviour: Insight from Ghana**

By Nina Afriyie<sup>\*</sup>, Lemayon L. Melyoki<sup>\*</sup> & Mariam Nchimbi<sup>‡</sup>

*The purpose of this study is to examine the effect of employee perceived self-efficacy on intrapreneurial behaviour among Small and Medium size Enterprises (SMEs). We surveyed 234 employees from SMEs in the fresh fruit juice processing industry in Ghana using a structured questionnaire to obtain data. A statistical data analysis was performed. Our findings show that employees' perceived self-efficacy relates positively to their intrapreneurial behaviour. However, we observed also that self-efficacy was not a sufficient condition for intrapreneurial behaviour to occur. Firm characteristics play a crucial role in the practice of such behaviour. That is, while employees' self-efficacy is a principal determinant of employees' intrapreneurial behaviour, the strength of self-efficacy is enhanced by firm resource. These results have policy implications for the promotion of SMEs in Ghana and similar contexts. The study contributes to knowledge on intrapreneurship in SMEs by pointing out that individual characteristics are not always linear in relation to intrapreneurship. Other factors that enhance these characteristics need to be taken account of. We provide recommendations for policy makers and researchers. (JEL H32, J20, O15)*

**Keywords:** *Intrapreneurship, Innovation, Self-efficacy, SMEs, Ghana.*

### **Introduction**

Intrapreneurship is considered critical for firms to remain competitive in the market place (Ahmad et al. 2012). Baruah and Ward (2014) assert that intrapreneurship in today's economic environment can be used as a strategy to enhance organizational competitiveness. Intrapreneurship creates a culture that encourages employees to channel the resources of a firm toward development of new products or services (Peng et al. 2010). Thus, through intrapreneurship employees become “change agents” in firms, bringing about new ideas and advocating for implementation of such ideas. This eventually contributes to business growth as it provides an environment that supports and sustains innovation. Intrapreneurship enables the organization to tap into each employee's talent, as well as attracting and retaining most intrapreneurial employees (Vargas-Halabi et al. 2017). By practicing intrapreneurship employees who have

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innovative ideas referred to as dreamers are able to implement those ideas within the existing organisation rather than create spin-offs (Pinchot 1985).

Intrapreneurship has traditionally been viewed as a phenomenon that could only be practiced in the context of large corporate organisations. As a result, researchers have tended to ignore small and medium size enterprises hence lack of research on how to enhance, develop and promote this phenomenon in the context of small businesses (Carrier 1994, 1996, Antoncic and Hisrich 2001, Bosma et al. 2011, Sijde et al. 2013, Stam and Stenkula 2017). Therefore, the concept has been well embraced by large companies (Urban and Oosthuizen 2009). Large companies such as Sony, Saturn, and Google serve as examples. Thus, the play station inside of Sony and the Saturn inside of general motor are results of intrapreneurial success. Indeed, Google promotes intrapreneurship through its culture of allowing its employees to use 20 percent of their working hours to work in pursuit of their own new ideas. This culture is believed to be the source of Google's success (Schawbel 2013). In like manner, large companies in transitional economies, Africa in particular are embracing intrapreneurship, though at a slower pace (Urban and Oosthuizen 2009). This could be due to fear of change associated with intrapreneurship (Intrapreneurship Conference Report 2017).

According to Amo (2010), intrapreneurship is an individual level concept, where the individuals own traits regarding how they perceive their abilities to identify an opportunity, handle it, and turning that opportunity into fruition is of essence. These human behaviours may be triggered by two expectations (Bandura 1997, 1986). The first relates to the expectations concerning one's ability to perform a particular behaviour, i.e. self-efficacy. The second encompasses the expected outcomes of the particular behaviour. This indicates that a person's self-efficacy as well as the expected outcome, may determine how much effort and persistence he/she shows towards a given task or behaviour. However, research works on intrapreneurship have not considered these two constructs while researching on intrapreneurial behaviour. Considering intrapreneurship from the individual initiated perspective, this study investigates intrapreneurial behaviour from the angle of employees' 1) self-efficacy expectation and 2) outcome expectation. It answers the research question; to what extent does employees' perceived self-efficacy and outcome expectation influence their zeal for intrapreneurship in the presence of firm resource availability?

This paper addresses the intrapreneurship from the individual induced perspective and hence contributes in several ways to the current development of the intrapreneurship field. The paper makes three contributions: 1) contributes knowledge to intrapreneurship in SME 2) contribute knowledge to employee initiated intrapreneurship from a psychological angle; 3) contributes to knowledge on firm resources and intrapreneurship. The rest of the paper is organized as follows: literature review, methodology, research findings and finally discussions and conclusions.

## Literature Review

### *Concept of Intrapreneurship*

While ‘entrepreneur’, has a long and rich history in the literature, the first publication of the term ‘intrapreneur’ did not occur until the late 1970s and when it was first introduced by Pinchot and Pinchot (1978). Pinchot explains intrapreneurship acts as an innovative and revolutionary, as they break the status-quo and hierarchy in an organisation. Later scholars defined intrapreneurship in similar ways (see Antoncic and Hisrich (2003), Mokaya (2012)). In this research, we view intrapreneurship as the process by which individual employees within existing firms take self-starter initiatives to depart from routine ways of doing things within the firm, to act proactively and innovatively dependent on the firm’s resources in an agented fashion to advance the firm and make it competitive (Afriyie et al. 2019).

Theoretically, intrapreneurship is entrepreneurship in a different context. This means measuring intrapreneurship applies the same measures as entrepreneurship since the two concepts are not distinct from each other. Antoncic and Hisrich (2003) assert that intrapreneurship is now developed as a more integrative concept based on two predominant streams in previous theory (entrepreneurial orientation and corporate entrepreneurship). They proposed that intrapreneurship should be viewed as a multi-dimensional concept with eight distinct but related components. These are new ventures, new business, product/service innovativeness, process innovativeness, self-renewal, risk taking, proactiveness and competitive aggressiveness. Most of the studies on intrapreneurship have been twisting and turning these eight dimensions as a measure of intrapreneurship. Antoncic and Hisrich (2003) argue that the eight dimensions proposed could also pertain to the same concept of intrapreneurship in terms of the Schumpeterian concept of innovation

From Table 1 this current study argues that all three approaches, are acts of intrapreneurship where employees exhibit their quota to the growth, advancement and competitiveness of the firm using resources available in an agent relationship to bring radical or incremental changes in products, processes and or marketing activities. This is the essence of intrapreneurship in the generic sense. Intrapreneurship is a behavioural outcome. Therefore, any intrapreneurial action is exhibited by the behaviour of individuals in the form of being innovative or proactive. This study focuses on the innovativeness and proactiveness as a measure of employees’ intrapreneurial behaviour. This is consistent with Knight (1997) who posits that innovativeness and proactiveness are robust measurements of intrapreneurial behaviour. A considerable number of studies (eg Sijde et al. 2013, Heinonen and Korvela 2014, Taştan and Güçel 2014, North 2015, Gawke et al. 2019) have used innovativeness as a measure of intrapreneurship with all concluding that innovativeness is a key indicator of intrapreneurship.

**Table 1.** Overview of Different Conceptualization of Employee Intrapreneurship

Approach	Conceptualization	Reference
The entrepreneurial orientation approach	Employee intrapreneurship is conceptualise on the basis of an employee's entrepreneurial orientation (i.e., proclivity towards innovativeness, risk taking and personal initiatives)	Wakkee et al. (2010), Sun and Pan (2011), Rigtering and Weitzel (2013), Moriano et al. (2014), Valsaina et al. (2016)
The intrapreneurial outcomes approach	Employee intrapreneurship is conceptualised as employees' participation in an organisations intrapreneurship pursuits or a number of implemented intrapreneurial initiatives	Bager et al. (2010), Parker (2011), Stam (2013), Urbano et al. (2013), Guerrero and Pena-Legaskue (2013)
The behaviour-based approach	Employee intrapreneurship is conceptualise on the basis of employee activities that contribute to firm-level intrapreneurship, and more recently as employees' agentic and anticipatory behaviours aimed at creating new businesses for the organisation (i.e. venture behaviour) and enhancing an organisation's ability to react to internal and external advancements (strategic renewal behaviour)	Park et al. (2014), Mustafe et al. (2016), Gawke et al. (2017), Gawke et al. (2019), Woo (2018)

Source: Gawke et al. (2019).

This present study indicates that some of the many dimensions of intrapreneurship proposed in literature are redundant. For example dimensions such as new venture, new business venturing, self-renewal, strategic renewal (eg. Antoncic and Hisrich 2003, Guth and Ginberg 1990, Zahra 1993, Sharma and Chrisman 1999, Schollhammer 1981, Covin and Slevin 1986, 1991), all lead themselves into the broader concepts of innovation. A detailed description of new venture, business venture, and self-renewal could culminate into innovativeness. Such that in discussing about innovation and its various activities; such as new creation in terms of process, product, technology, venturing new market identifying new market niche and opportunities (Schumpeter 1939, Drucker 1985) all these dimensions fall in line.

Proactiveness has also been established in literature as an important behaviour aspect of intrapreneurship. Pro-activeness relates to pioneering and initiatives taking in pursuing new opportunities or entering new markets (Lumpkin and Dess 1996) and describes an act in anticipation of action to be taking. Morris (2001) defines organisations which are intrapreneurial as ones that proactively seek to grow and is not constrained by the resources it currently possesses. Pro-activeness has been shown to be positively associated with intrapreneurial intentions (Crant 1996) and behaviour. A firm is said to be intrapreneurial when its employees are always taking initiatives, tackling issues head on, anticipating and preventing problem and are change oriented (Bateman and Crant 1993). Becherer and Maurer (1999) found that entrepreneurs who exhibited a proactive behaviour were inclined to adopt more business opportunities.

A study conducted by Vargas-Halabi (2017) among University professionals in private organisation in Costa Rica found that proactivity is a higher level construct of intrapreneurship. Sijde et al. (2013) found a similar view that proactiveness such as initiative taking, as a measure of intrapreneurship. Gawke

et al. (2019) also assert that employees may proactively combine existing resources to create a new product in an intrapreneurship firm. In addition, competitive aggressiveness and risk-taking in a more in depth direction are skewed towards proactivity. Proactiveness is also used in this study as a measure of employee intrapreneurial behaviour. It is operationalised as 1) thinking in terms of future, 2) taking initiatives and 3) being active not passive in the business environments.

### *Social Cognitive Theory*

Social cognitive theory is a learning theory based on the idea that people learn by observing others. These learned behaviours are central to one's personality even though social psychologists argue that the environment one grows up in contributes to behaviour the individual person is just as important. Bandura (2001) also argues that behaviour is influenced by the interaction of the following three determinants: personal, which is related to whether the individual has a sense of self-efficacy and how high or low is this self-efficacy towards behaviour (self-efficacy); behavioural, which is related to the response an individual receives after they perform a behaviour (outcome expectation) and environmental, related to aspect of the environment or a particular setting that influence the individual's ability to successfully complete a behaviour. This theory guides this study in understanding how the individual's self-efficacy and outcome expectation influence employees towards an intrapreneurial behaviour. The argument is, in as much as the environment matters when an individual's behaviour is mentioned, the individual's own positioning is of prime concern.

Self-efficacy describes an individual's belief in his or her ability and capacity to successfully complete a given task. According to Bandura (1986), self-efficacy does not necessarily reflect the skills one has, but the judgment of what one can do with whatever skills one possesses. Self-efficacy affects the cognitive functioning of an individual, and may predict, mediate and influence behaviour towards work (Wood and Bandura 1989, Pajares and Graham 1999, Usher and Pajares 2006). Self-efficacy could be seen as a process of psychological change operating through the alteration of individuals' expectations (Bandura 1977, 1986, 1997). Efficacy beliefs are said to determine subsequent behaviour, both in terms of the initiation and the persistence of behaviour (Bandura 1982) and that people take action when they hold high efficacy beliefs that make the effort seem worthwhile.

Self-efficacy may emanate from a number of sources; an individual's past experience of accomplished performance, vicarious experience obtained from mentors, role models –learned by observing them or reading about them, verbal persuasion from encouragement and exhortation from people friends, family members and emotional arousal which is obtained from a stressful or a rise of a necessity (Bandura 1977, 1982, Muretta 2005). A critical look at the sources of self-efficacy leads itself into either a 'pull' or a 'push' factor of entrepreneurship. This explains why self-efficacy is not a static trait (Hollenbeck and Hall 2004) as exposure and experience acquired through learning from mentors, role-models, as well as an individual's passion over a new business idea could naturally push an individual to become efficacious. Gist and Mitchell (1992) also argue

that self-efficacy is task-specific. It is a conditional state that is proximal to behaviour.

Pinchot (1999) suggests a set of skills, abilities and behaviours necessary to be developed among the employees for promotion of organisational intrapreneurism. Out of the ten skills<sup>1</sup> proposed by Pinchot in assisting organisations to be supportive for intrapreneurism, self-efficacy was identified as a robust factor affecting behaviour. However, self-efficacy has been researched extensively in social science disciplines but more recently in management and entrepreneurship research (Barakat et al. 2014). Thus, research on self-efficacy in management and entrepreneurship has not been extensively done in literature. For example Yusuf (2011) conducted a study in Malaysia using 300 UKM undergraduate students who responded to the research questionnaires which include four constructs, namely, the self-efficacy construct (3 sub-scales), achievement motivation construct (3 sub-scales), and self-learning strategies construct (6 sub-scales). The Path Analysis revealed a direct effect of self-efficacy on participants' academic accomplishment. Additionally, the analysis of direct and indirect results indicated the meditational role of self-efficacy on achievement motivation and learning strategies. Similar finding was established through the use of a step by step regression by Motlagh et al. (2011) that self-efficacy could have an effect on Iran high school students' academic achievements. Artino (2012) in his study on academic self-efficacy: from educational theory to instructional practice revealed that self-efficacy was the strongest single predictors of college students' academic achievement and performance. These findings could be due to the nature of academic institutions where an individual would have to put up his/her best against all odds to be able to excel. However, these studies did not consider self-efficacy and intrapreneurial behaviour from the angle of employees in small firms as the academic setting and the small business setting are not same.

Other empirical studies on self-efficacy and entrepreneurial intention and orientation such as Boyd and Vozikis (1994), Mohd et al. (2015), have found positive relationships between the two concepts. These results could be attributed to the nature of entrepreneurship, where someone with a daring attitude who believes in his/her ability is what is needed to start and complete an entrepreneurial venture. However, in the Africa context in particular Ghana, where people may not be daring, may be having phobias to change and always sceptical about questioning the status quo coupled with lack of resources; will self-efficacy increase entrepreneurial practices? However, this current study focus on employee self-efficacy and intrapreneurial behaviour not entrepreneurial behaviour, therefore different findings may be obtained. Gist and Mitchell (1992) stress that self-efficacy is a task-specific belief and that self-efficacy measurement should therefore be tailored to the specific domain under study.

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<sup>1</sup>Pinchot (1999) suggests ten steps to intrapreneurism in firms; 1) social knowledge to make innovations significant, 2) prior intrapreneurial or entrepreneurial understanding, 3) inventiveness, 4) to identify prospects that others could not identify, 5) to interact with other organisational experts and customers, 6) to correspond effectively across the technical boundaries, 7) self-efficacy in initiating or leading the organisational change processes, 8) risk orientation, 9) forbearance against uncertainty and ambiguity and 10) high need for achievement, understanding the organisational power and politics.

Cetin (2011) also conducted a study to discover the role of self-efficacy and locus of control on the process of intrapreneurship among 211 employees in the information sector in Turkey. Findings reveal that employees with high self-efficacy succeed on intrapreneurial processes and activities particularly in innovativeness. Comparing entrepreneurship and intrapreneurship, employees with high self-efficacy could behave intrapreneurial where the onus of resources provision for any intrapreneurial action lies on the owner manager. In that context what is required, of the employees is the “can do spirit” while with entrepreneurship high self-efficacy alone may not suffice for entrepreneurial action. The sufficient condition of marshalling the crucial resources before that entrepreneurial action may also need to be considered. Context is of essence in research since each context exhibit different social, legal, political, economic policies. Therefore, the Turkish context may be different from the Ghanaian context which is the focus of this study. As a result, findings may differ. Moreover, Cetin (2011) study did not consider employees in the SME sector. Thus, studies on employee self-efficacy and intrapreneurial behaviour in SME are almost missing in literature.

Outcome expectation on the other hand, is the anticipation that a given behaviour will or will not lead to a given outcome. It is the consequences of one's actions (Bandura 1986). Most intentional human behaviour is regulated by forethought (Bandura 1982). Borrowing from Vroom expectancy theory, individuals would always weigh various options to take the behaviour that brings maximum and favourable returns. Research on outcome expectations has found that they influence work-related outcomes, such as knowledge sharing (Hsu et al. 2007) and innovative work behaviour (Yuan and Woodman 2010). Most of the studies on behaviour, used self-efficacy beliefs, however, rarely touched on outcome expectation. This gap is the same line of criticism for Bandura (1997) work, where he was accused of doing more work on efficacy beliefs as oppose outcome expectation. Very few studies including Dorner (2012) made use of innovative self-efficacy and outcome expectation and their effect on innovative work behaviour.

The cross-sectional results from a survey of 350 employees and their direct supervisors in a Swiss insurance company show that innovative work behaviour positively influences task performance. The results from Structural Equation Modeling (SEM) further show that innovative self-efficacy is a strong predictor for innovative work behaviour. Moreover, the findings support that innovative self-efficacy beliefs determine outcome expectations. Thus, positive outcome expectations could represent another source of the motivation. However, the results also show that outcome expectations do not contribute to the prediction of innovative work behaviour. Recent research on the link between outcome expectations and innovative work behaviour has provided empirical support for expected positive performance outcomes being positively related to innovative work behaviour (Yuan and Woodman 2010). Accordingly, it is hypothesized that:

*H<sub>1</sub>: Self-efficacy expectations positively affect intrapreneurial behaviour.*

*H<sub>2</sub>: Outcome expectations positively influence intrapreneurial behaviour.*

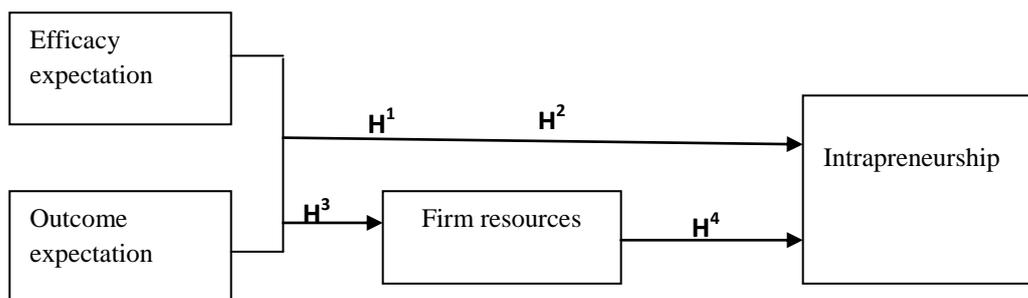
However, these studies did not consider employees in SME. They also did not make use of the broader term intrapreneurship. They used a function of intrapreneurship which is innovation. This current study examines the variance of intrapreneurial behaviour based on employees' efficacy beliefs and outcome expectation among employees in SMEs.

### *Self-efficacy Expectations and Outcome Expectation*

Although both self-efficacy expectations and outcome expectations influences behaviour, one would wonder which one triggers the other to causing a behaviour. Social cognitive theory assumes that the type of outcomes people anticipate depend largely on their judgment of how well they can perform (Bandura 1986). More precisely, people see outcomes as contingent on the adequacy of their performance and they rely on their efficacy beliefs/expectations when judging their anticipated performance. The argument here is that an individual's efficacious behaviour has an important impact on the results of one's actions. Thus, efficacy beliefs influence the anticipated outcomes. For example, employees who judge themselves inefficacious in identifying new ideas and trying to push them through to a product will not become intrapreneurs. This, in turn, results in non-intrapreneurship behaviour. This argument is supported by one of Vroom (1964) theory; *expectancy*; which he define as a subjective probability of an action or effort leading to an outcome. Thus, it measures the perceived correlation between an action and an outcome. A study by Compeau et al. (1999) and Hsu et al. (2007) among students, found that computer self-efficacy beliefs affect outcome expectations related to the use of computers. These researches did not study the behaviour of employees within an establishment who sometimes could go an extra mile based on a promised bonus.

Contrary, from the generic assumption of Vroom (1964) expectancy theory, people select behaviour over others, based on what they expect the result/outcome of that behaviour to be. This indicates that at some point, favourable outcome expectations could make people to become efficacious. Based on the above discussions, a conceptual framework was developed to depict this relational flow (See Figure 1). The predictor variables are self-efficacy (looking at workers efficacy expectation and their outcome expectation) and organisational resources (mediator) while the criterion variable is intrapreneurial behaviour with innovativeness and proactiveness as its indicators. The hypothesized relationships are described next.

**Figure 1.** *Conceptual Framework Depicting the Relational Flow between Self-efficacy, Firm Resources and Intrapreneurial Behaviour with their Coefficient*



*Firm Resources and Employee Intrapreneurial Behaviour*

According to Deloitte Global Report (2015), employees need resources (time, physical, financial, human) in order to come up with innovations. The “20% Rule” principle applied by Google in which employees are allowed to spend one day per week on a project that is unrelated to their work is a way of enhancing the intrapreneurial drive in workers. However, it is an observed fact that SMEs unlike large firms face typical resource constraints that often inhibit their intrapreneurial pursuit. Some studies are of the view that inadequate and in some cases lack of resources in SMEs limits their ability to behave intrapreneurial particularly in the area of innovation. Others are of the view that it the resource constraint cannot inhibit their intrapreneurial behaviour. A study carried out by De Massis et al. (2017) among the German Mittelstand firms using a model identifying and integrating six salient traits of firms that allow them to efficiently orchestrate their resources to innovate and outcompete their competitors in the global market, enabling those firms to overcome their resource-related weaknesses and turn them into strengths. It was reveal that resource unavailability could not hinder German Mittelstand firms from behaving innovatively.

A study by Hewitt-Dundas (2006) on resource and capability constraints to innovation in small and large plants revealed that the unavailability of resources may constrain intrapreneurship characterised by innovation on the part of small firms. Urbano et al. (2013) in their study on the influence of resources and capabilities on the probability of becoming an intrapreneur found that companies’ resources and capabilities are a key factor in the development of intrapreneurship.

In as much as these previous studies informed this present study, they did not examine the mediating role of firm resources availability on the employee intrapreneurial behaviour. Thus, literature is not informing whether the presence of firm resources could make employees go an extra mile to behave intrapreneurial. Therefore, this current study examined the mediating effect of firm resources on the relationship between antecedents of employee intrapreneurial behaviour and intrapreneurial behaviour. It is therefore hypothesised that:

*H<sub>4</sub>: Firm resource has a mediating effect on employee self-efficacy and intrapreneurial behaviour.*

*H<sub>5</sub>: Firm resource has a mediating effect on employee self-efficacy and intrapreneurial behaviour.*

**Methodology**

The study is based on an explanatory design where the used of descriptive is inevitable (Saunders et al. 2012). A total list of 53 fruit juice processing enterprises of Ghana was obtained from the Fruit Processors and Marketing Association of Ghana (FPMAG). This is a National association that coordinates the affairs of SMEs in fruit processing. This total number of 53 comprised of SMEs into dry fruits juice processing, SMEs into fresh fruit juice processing

and large firms into fresh fruits juice processing. Thirty-four (34) out of the 53 fell under the SMEs in fresh fruit juice processing which was the interest of this study. This list has been obtained from Fruit Processors and Marketers Association of Ghana (FPMAG).

A total of 1870 non managerial employees in the 34 SMEs spread within the three regions are included in the sampling frame. This figure is derived by summing the lowest (5) and the highest (50) number of employees likely to be engaged by these SMEs. This figure was then multiplied by the total number of SMEs (34) obtained from FPMAG. That is  $(34 \times 55) = 1870$  employees. This method was employed because it was not practical to obtain the total number of employees in each SMEs considered in this study. From the total of 1870, a sample of 282 units has been drawn with a confidence level of 95% using the formula derived by Kothari (2014). The sample size in any research work is very crucial because the size of the sample dictates the level of sampling error which can limit the extent of generalisation as well as conclusions about the population.

$$n = \frac{Z^2 \cdot p \cdot q \cdot N}{e^2 (N-1) + z^2 \cdot p \cdot q}$$

Which is valid where  $n$  is the sample size,  $Z$  obtained from normal distribution table (1.96), under a confidence level, 95%,  $e$  is the desired level of precision 5%,  $p$  is the estimated proportion of an attribute that is present in the population (0.5), and  $q$  is  $1-p$  (0.5).  $N$  is the total sample size. The sample size of 282 has been increased to 290 after proportional distribution of the sample size into each region. This is because all decimals were converted to whole number thereby increasing the sample size.

To collect data for this study, a survey was conducted involving 290 employees from fresh fruit juice processing SMEs in Ghana. Using a simple random technique, 234 responses were secured, which made an 81 percent response rate. This is adequate given that a response rate of at least 50 percent is suitable for use (Mugenda and Mugenda 2010). Employees were chosen because they are the focus of intrapreneurship studies (Stevenson and Jarillo 1990). Three regions (Greater Accra, Eastern and Central) of Ghana were chosen for the study. These regions were chosen because they have a large concentration of SMEs who operate in juice processing industry. Probability sampling was employed in the context of stratified samples to select the respondents. Data was assessed for reliability at Cronbach Alpha Coefficient of 0.925. This is above the ideal Cronbach Alpha of 0.7 (Rogue et al. 2014, Hair et al. 2014). However, some of the individual variables produced internal coefficients below 0.7, but generated acceptable internal coefficients of 0.5. Content and face validity were ensured by giving the research tool to expert in entrepreneurship to assess while construct and discriminant validity was ensured using exploratory and confirmatory factor analysis.

The survey instruments contained measurement items derived from previous studies. Self-efficacy items were adapted Bandura (1986) and other related studies (Cetin 2011). Items were anchored on a 5-point Likert scale whereby 1=very low extent to 5=very high extent. The indicators of intrapreneurial behaviour were measured by item adapted from Antoncic and Hisrich (2003) and anchored on a five-point Likert scale ranging from 1 = high in disagreement to 5 = high in agreement. Firm resource was developed and measured on a five-point scale ranging from 1 = a very little extent to 5 = very high extent.

Items used in measuring organisational resources produced two components; resource for production such as (water, raw material, electricity, tools and equipment for production) and intrapreneurial resources such as (the presence of an intrapreneurial inclined workers and or owner manager, in-house knowledge on intrapreneurship acquired through trainings and workshop, intrapreneurial networks, money) Money which is perceived to be a factor of production, loaded under intrapreneurial resources after six iterations. This suggests that money is an indispensable resource for intrapreneurial activities.

Questionnaires were administered in person and the returned questionnaires were checked, numbered and the items coded and processed using SPSS 22. Outliers and missing values were checked and assumptions for normality, homogeneity, linearity and collinearity were met. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to check the validity and to reduce items used in measuring the study constructs. A total of 30 items were used in conducting exploratory factor analysis. After six (6) iterations, six (6) components were produced with 22 items retained. The items that were isolated either cross loaded or did not produce the threshold value of 0.4 (Hair et al., 2014). Each component culminated into a study construct. The six components produced a total variance of 65.58%, KMO 0.847, Bartlett's test of sphericity ( $\chi^2 = 2382.198$ , df 253  $p < 0.001$ ).

## Research Findings

Sample characteristics were analysed using frequency distributions (Table 3). Analysis shows gender groups are fairly represented with 59.4% males. The modal age group is 25-31 years (38.5%) with 62.4% in the range 18-31years. With respect to level of education, 37.8% of respondents had attended senior high school. Table 2 shows the demographic description of the study participant.

Output from sampled characteristics reflect the characteristics of the study context where the population is youthful, male mostly accepted in the industries compared to their female counterparts and with a moderately high rate of literacy. In the case of the measures of all study constructs as shown in Table 3, all items used seemed important for the measurement of the study constructs. This is because they have quite large mean values, indicating their contribution to each of the constructs.

**Table 2.** Demographic Characteristics

Demographics	Percentages
Gender	
Male	59.4
Female	40.6
Age	
18-24	23.9
25-31	38.5
32-38	19.2
39 and above	18.4
Level of Education	
Basic	10.3
Junior high school	19.7
Senior high school	30.3
Diploma	24.8
Bachelor	11.5
Postgraduate	1.7
Others	1.7

The reliability analyses as shown in Table 4 indicate that the 6 factors undoubtedly resemble the concepts. Although it may be argued that the more the number of items for the variable the greater the reliability, it is observed that the reliability weight for the individual item matters most and not just the quantity of the items. For instance, a construct with only three items produce a reliability scale of 0.884 which is higher than a construct with four items as shown in Table 4. In addition, all the variables produced an above average reliability coefficients of 0.7. These reliability figures are above the threshold recommended by Hair et al (2014) to be the acceptable reliability for a study construct. This indicates that the study data are reliable.

**Table 3.** Mean Scores on Study Variables

	N	Mean	Std. Dev
Ability to encourage to try out new Things	234	3.94	0.974
Confident in my ability to solve problems creatively	234	4.00	0.816
Growth of the firm	234	4.07	0.717
Increase in competitiveness	234	4.08	0.725
New ways of carrying out activities	234	3.98	0.821
Constantly modifying production processes	234	3.95	0.754
Constantly developing new product lines	234	3.96	0.883
Constantly improving upon old products and raising the quality of new ones	234	4.21	0.718
Finding ways of overcoming obstacles ahead of time	234	4.24	0.724
Being proactive means being a risk taker	234	4.17	0.701
Being proactive means being able to anticipate and plan events ahead of time	234	4.13	0.738
Being proactive means being 'up and doing'	234	4.23	0.698
Presence of intrapreneurial inclined workers	234	4.04	0.907
Intrapreneurial knowledge acquired through training and workshops	234	3.91	1.034
Intrapreneurial networking	234	3.86	0.962
Financial resources to implement ideas	234	3.89	0.992
Office space for working out new ideas	234	4.03	0.928
Equipment for production	234	4.28	0.732
Water for production	234	4.38	0.679
Raw materials for production	234	4.41	0.694
Electricity for production	234	4.37	0.669

**Table 4. Reliability Test**

Construct and their reliability Before EFA (items)		Construct after EFA		Construct and their reliability after CFA	
Efficacy Expectation (5 )	0.796	Efficacy beliefs (2)	0.623	Efficacy Expectation (2)	0.623
Outcome Expectation (5 )	0.792	Outcome Expectation(2)	0.660	Outcome Expectation (2)	0.660
Innovativeness (6)	0.874	Innovativeness (4)	0.825	Innovativeness (4)	0.825
Proactiveness (5 )	0.714	Proactiveness (4)	0.799	Proactiveness (4)	0.799
Resources for production (5)	0.817	Resources for production (5)	0.817	Resources for production (4)	0.803
Intrapreneurial resources (4)	0.884	Intrapreneurial resources (4)	0.884	Intrapreneurial resources (3)	0.884
<b>Composite Reliability (30)</b>	<b>0.925</b>	<b>Composite Reliability (19)</b>	<b>0.851</b>	<b>Composite Reliability (18)</b>	<b>0.845</b>

*Confirmatory Factor Analysis*

Table 5 presents the results of the confirmatory factor analysis (CFA) for the measurement models of all five constructs of employee efficacy beliefs, outcome expectation, firm resources availability, innovativeness and proactiveness. The analyses are evaluated in terms of the CMIN, RMSEA, TLI and the CFI measures of fit; the statistical significance of the estimated coefficients, squared multiple correlation coefficient, composite reliability and average variance extracted are significantly associated with their observed variables because all the estimation parameters of those variables are acceptable, which shows the signs are positive. The measures of fit for the TLI and the CFI are evaluated in the context of suggested minimum threshold values of 0.9 (Arbuckle 2012). The statistical significance of coefficients is evaluated in terms of the results of a hypothesis test with the null hypothesis that the true coefficient is zero using a significance level of 5%. The SMCC is evaluated in terms of the minimum value of 0.3 (Jöreskog and Sörbom 1982). Construct reliability (CR) should have the lower threshold, which is equal to 0.7 and the variance extracted (VE) should have the lower threshold, which is equal to 0.5. The squared multiple correlation coefficient (SMCC) should be at least 0.3 (Jöreskog and Sörbom 1982, Hair et al. 2014). The root mean square error of approximation (RMSEA) index constitutes a parsimony measure that depicts the discrepancy between the observed and estimated covariance matrices per degree of freedom. RMSEA values below 0.08 are considered good fit (Browne and Cudeck 1993).

**Table 5. Indices of Confirmatory Factor Analysis**

Indices	Measure of Fit	Remarks
Chi-Square/Degree of Freedom CMIN/DF	1.626	Very fit
Root Mean Square Error of Approximation; RMSEA	0.052	Fit
Tucker and Lewis Index;TLI	0.937	Very fit
Comparative Fit Index;CFI	0.948	Very fit
Goodness of Fit Index;GFI	0.901	Fit
Incremental Index of Fit;IFI	0.949	Very fit
PCLOSE	0.380	Closely fit

A look at Table 6 shows that all the model indices for this study were within the ideal model indices threshold. Hence, the measurement model data closely fit the model proposed for this study.

As shown in Table 6, the probability for variables in the prediction of each item are significantly different from zero at a 0.001 (two-tailed) indicating that for the model to predict the dependent variable for any value of independent variable is valid.

### **Results of the Structural Equation Model Analysis for the Conceptual Model**

In order to test the proposed relationships between self-efficacy beliefs, outcome expectations, and intrapreneurial behaviour, structural equation modeling was applied. The first was to test the straight line effect between employee self-efficacy beliefs and outcome expectations on intrapreneurial behaviour.

From Table 7, it can be mentioned that consistent with hypothesis 1, employee self-efficacy beliefs has a statistically significant positive effect on intrapreneurial behaviour ( $\beta = 0.98$ ,  $p < .001$ ) while hypothesis 2 has also been confirmed based on the findings that outcome expectations has significant positive effect on intrapreneurial behaviour ( $\beta = 0.19$ ,  $p < 0.005$ ). However, hypothesis 2 is supported with a weak standard coefficient, which provides theoretical evidence to support employee intrapreneurial behaviour. Nevertheless, findings support hypotheses 1 and 2.

To test for mediation, the procedures of Mathieu and Taylor (2006) were followed, which test: (1) whether there is a significant relationship between independent and dependent variables; (2) whether the relationship between independent and mediator variables is significant; (3) whether there is a significant relationship between mediator and dependent variables; and (4) whether the relationship between independent and dependent variables becomes less or non-significant when the influence of the mediator is controlled. The results of the main effects show that Mathieu and Taylor's (2006) preconditions (1) and (2) were met for both self-efficacy beliefs and outcome expectation which had produced an insignificant direct effect.

**Table 6.** *Confirmatory Factor Analysis Outputs*

			<b>Unstandard Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>Standardized Regression Weight Estimate</b>	<b>Squared Multiple Correlation Coefficients</b>	<b>Average Variance Extracted</b>
EBLS1	<---	Efficacy	1.000				0.764	0.584	
EBLS2	<---	Efficacy	0.658	.081	8.142	***	0.601	0.361	0.41
OEXP1	<---	Expectation	1.000				0.819	0.671	
OEXP2	<---	Expectation	0.743	.264	2.817	.005	0.601	0.362	0.25
RA1	<---	Resprod	1.000				0.571	0.326	
RA2	<---	Resprod	1.102	.129	8.539	***	0.798	0.637	
RA3	<---	Resprod	1.031	.122	8.430	***	0.806	0.649	
RA4	<---	Resprod	0.940	.117	8.055	***	0.744	0.554	
RA5	<---	Resprod	0.730	.107	6.843	***	0.566	0.320	0.29
INTPRS1	<---	Hrintr	1.000				0.702	0.493	
INTPRS2	<---	Hrintr	1.384	.112	12.32	***	0.849	0.720	
INTPRS3	<---	Hrintr	1.353	.108	12.54	***	0.892	0.795	
INTPRS4	<---	Hrintr	1.256	.110	11.41	***	0.803	0.645	0.31
INN1	<---	Innovation	1.000				0.825	0.681	
INN2	<---	Innovation	0.968	.064	15.22	***	0.869	0.755	
INN3	<---	Innovation	0.963	.080	11.99	***	0.739	0.546	
INN4	<---	Innovation	0.598	.069	8.680	***	0.564	0.318	0.26
PRO1	<---	Proactive	1.000				0.656	0.430	
PRO2	<---	Proactive	1.137	.121	9.433	***	0.770	0.593	
PRO3	<---	Proactive	1.262	.135	9.364	***	0.812	0.660	
PRO4	<---	Proactive	0.878	.116	7.543	***	0.597	0.357	0.25

*S.E= Standard Error; C.R.= Critical Ratio; P = Probability.*

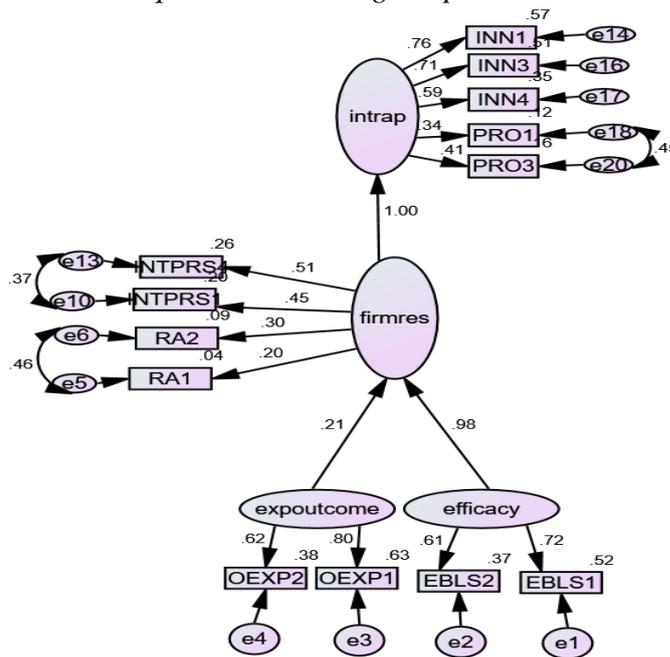
**Table 7.** Regression Weights of the Employee Self-Efficacy, Outcome Expectation and Intrapreneurial Behaviour. Direct Effect

			USTD Estimate	S.E.	C.R.	P	STD Estimate	SMCC	AVE
Intrapreneurship	<---	Outcome expectation	0.085	0.039	2.172	0.030	0.190	0.662	
Intrapreneurship	<---	Efficacy	0.379	0.072	5.255	***	0.982	0.739	
EBLS1	<---	Efficacy	1.000				0.687	0.539	
EBLS2	<---	Efficacy	0.695	0.088	7.927	***	0.571	0.319	0.672
OEXP1	<---	Outcome expectation	1.000				0.806	0.134	
OEXP2	<---	Outcome expectation	0.766	0.303	2.531	0.011	0.610	0.138	0.3445
PRO4	<---	intrapreneurship	1.000				0.371	0.372	
PRO3	<---	Intrapreneurship	1.042	0.196	5.320	***	0.366	0.649	
INN4	<---	Intrapreneurship	1.563	0.316	4.950	***	0.565	0.326	
INN3	<---	Intrapreneurship	2.489	0.464	5.370	***	0.734	0.472	
INN2	<---	Intrapreneurship	2.481	0.447	5.554	***	0.859	0.662	
INN1	<---	intrapreneurship	2.559	0.465	5.498	***	0.814	0.739	
CMIN/DF = 1.692; RMR = 0.033; GFI = 0.951; IFI = 0.971; TLI = 0.960; CFI = 0.970; RMSEA = 0.055									

**Table 8.** Regression Weights of Employee Self-Efficacy, Outcome Expectation, Firm Resources and Intrapreneurial Behaviour Indirect Effect

			<b>UNSTD Estimate</b>	<b>STD Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>SMCC</b>
Firm resources	<---	Outcome expectation	0.070	0.210	0.038	1.825	0.068	
Firm resources	<---	Efficacy beliefs	0.266	0.978	0.090	2.955	0.003	
Intrapreneurship	<---	Firm resources	3.183	0.925	1.069	2.978	0.003	0.856
OEXP1	<---	Outcome expectation	1.000	0.821				0.674
OEXP2	<---	Outcome expectation	0.739	0.600	0.281	2.634	0.008	0.359
RA1	<---	Firm resources	1.000	0.210				0.044
RA2	<---	Firm resources	1.139	0.303	0.343	3.322	***	0.092
INTPRS1	<---	Firm resources	1.946	0.418	0.705	2.759	0.006	0.175
INTPRS4	<---	Firm resources	2.534	0.499	0.892	2.842	0.004	0.249
EBLS1	<---	Efficacy beliefs	1.000	0.733				0.538
EBLS2	<---	Efficacy beliefs	0.686	0.601	0.083	8.220	***	0.361
INN1	<---	Intrapreneurship	1.000	0.823				0.678
INN2	<---	Intrapreneurship	0.952	0.854	0.063	15.160	***	0.729
INN3	<---	Intrapreneurship	0.965	0.737	0.080	12.086	***	0.543
INN4	<---	Intrapreneurship	0.602	0.563	0.069	8.770	***	0.317
PRO1	<---	Intrapreneurship	0.305	0.282	0.073	4.179	***	0.080
PRO3	<---	Intrapreneurship	0.414	0.367	0.073	5.685	***	0.141

Figure 2. Structural Equation Modelling Output



As seen in Table 8 and Figure 2, when the mediator was introduced into the model, the precondition (3) for mediation was also met. Thus, there is a statistically significant positive relationship between firm resources and intrapreneurial behaviour ( $\beta = 1.000$ ,  $p < 0.005$ ), supporting hypothesis 3. In addition, precondition 4 for Mathieu and Taylor (2006) was also met such that outcome expectations became insignificant when the mediator was introduced. Employee self-efficacy belief on the other hand, was still statistically significant, but its significant power diminished from  $P < 0.001$  to  $P < 0.005$ . This indicates that the explanatory powers of both outcome and efficacy expectation is shared by the presence of firm resource. Therefore, it could be concluded that the model is recursive. Consideration of the significance of the paths in the structural model indicates that of the 17 estimated coefficients, 16 measures associated with the construct are statistically significant.

This study investigated two kinds of expectations as antecedents of intrapreneurship behaviour. Two kinds of expectations regarding behaviour from Social Cognitive Theory was applied (Bandura 1977, 1986). Expectations in terms of self-efficacy and outcome are important determinants of behaviour (Bandura 1997). In addition, initiating and sustaining an intrapreneurial behaviour among employees is influenced by both characteristics of the firm itself and by characteristics of the individuals involved.

The final model as indicated by Figure 2 shows the regression weight accounting for the relationship between the efficacy beliefs, outcome expectation as mediated by firm resources availability.

## Discussion

The exploratory analyses conducted show that employees' in SMEs may have a high level of self-efficacy beliefs/expectation and outcome expectation, in particular those in the fresh fruit juice processing industry. This finding suggests that employees in SMEs believe in their ability to start and successfully complete any given task, and this could lead to a higher intrapreneurial behaviour. This finding could be explained from the traditional perspective of how the Ghanaian child is brought up to become efficacious through poetry, traditional songs, drama, poetry and encouragement from the society. That is, the social environment educates the Ghanaian child in particular the male child, to be efficacious growing up.

The empirical investigation shows that employees' self-efficacy beliefs have an effect on intrapreneurial behaviour. This is consistent with the findings by Wakkee et al. (2010), Wood and Bandura (1989) who found that self-efficacy has a positive effect on intrapreneurial behaviour. This finding also supports the concept of self-efficacy from the social cognitive theory which assumes that the more efficacious an individual is, the higher the tendency for him/her to behave in a particular manner in this instance; intrapreneurial. This finding is not also surprising because the act of entrepreneurship irrespective of where it takes place requires an individual with traits such as self-reliance, resilience, high level of confidence, belief in ones abilities to perform, pragmatic, daring and the can do spirit. Hence, the findings that employees' self-efficacy is a key personal characteristic of intrapreneurship behaviour is in order. Outcome expectation was also significant to employees' intrapreneurial behaviour however, on a lower degree. This finding indicates that the end result of any behaviour or action is a contributory factor to performing that behaviour. This is in line with Vroom (1964) expectancy theory which assumes that a favourable outcome an individual expect could trigger an action or behaviour.

Furthermore, findings of this study discovered that between the two expectations, employee efficacy expectation is a stronger predictor of intrapreneurial behaviour than outcome expectation. That is, employees place much priority on their ability to successfully carry out an assigned task rather than considering the outcome of the behaviour. This supports the argument of Choi et al. (2011) that what you can do, and how well it can be done, determines the outcome. In addition, Bandura (1986) asserts that people may only rely on their perceived self-efficacy when deciding which course of action to pursue because their outcome expectations depend largely on the adequacy of their performance (Bandura 1986). Therefore, outcome expectations may not independently contribute to the prediction of intrapreneurial behaviour over and above self-efficacy beliefs. This finding is similar to Dorner (2012) who found self-efficacy beliefs to be a stronger predictor of innovative work behaviour (an indicator of intrapreneurship) with outcome expectation contributing very minimal to innovative work behaviour.

Resources, both tangible and intangible, are the core elements of any firm (Barney 1991). It affects all the activities in a firm resonating their competitive

advantage and performance. The study examined whether the presence of resources in firms in the presence of self-efficacy beliefs and a favourable outcome expectation could trigger employees intrapreneurial behaviour. Findings indicate an association between self-efficacy beliefs and firm resource availability. In the presence of employees who are efficacious and in the absence of resources, firms cannot achieve their core aim of existence much less to behave intrapreneurial. This finding is congruent to that of Davidson and Honing (2003) who assert that access to resources enhances the individual's ability to detect and act upon discovered opportunities and vice versa. Thus, firm employees' efficacious in the presence of resource availability may boost intrapreneurial actions. However, outcome expectations seem insignificant to firm resource availability. This implies that the outcome of any behaviour does not necessarily depend on the resources but the attitude to rightfully combine these resources to achieve the desired outcome. This agrees with Penrose (1959) argument on firm resources that it is not the quantity or availability of resources that matter but the rightful coordination and combination of the resources available within a firm.

Regarding the mediating role of firm resources availability, findings reveal that firm resources could be a mediator among employee self-efficacy beliefs, outcome expectation and intrapreneurial behaviour. This presupposes that whenever intrapreneurial activities is to increase as a result of employees' efficaciousness, or favourable outcome expectation, firm resources such as equipment, machines, utilities and raw materials that matter for the processing of fruit juice must be available. In addition, intrapreneurial inclined employees who serve as a role model and offer encouragement to fellow employees', increasing in-house knowledge on intrapreneurship through training and workshop must as well be present.

These findings implied that owner-managers and or managers should pay attention to enhancing the self-efficacy beliefs of employees since it could trigger an individual's intrapreneurial behaviour. They could help employees to increase and maintain their efficacy drive by encouraging them to believe in their abilities and always try out something new. They could also give their employees' additional responsibility and duties using a job rotation strategy, delegating to them as well as ensure an effective two way communication in the firm. Most importantly, an environment free from distractors with resources readily available would be ideal in addition to encouraging employees to establish high quality relationships with co-workers so as to learn from one another. These would increase as well as maintain and sustain the self-efficacy beliefs of employees in SMEs. However, managers should be aware that all employees will not necessarily respond in the same way, hence, varied strategies would be required from time to time.

To the employees in SMEs in particular those in fresh fruit juice processing, findings from this study indicate that how well a task is accomplished determines how good the outcome would be. However, how well an action is carried out is a factor of an individual's self-efficacy beliefs. Having a high self-efficacy is adequate to succeed on any task. Therefore, employees should whip up their self-efficacy beliefs through learning, carefully observing and willingness to try hands

on new and challenging assignments in and outside their firm. This would increase their efficacy towards handling any assign task. This study asserts that the labour world is gradually shifting from the era of *what do you know* to *what can you do*? Thus the belief in one's ability, capability and confidence to efficiently perform a task is relevant in the modern labour market, and this is true in the Ghanaian context as well. Employees must therefore continually hold high their self-efficacy in whatever they are assigned to do. This can have a positive spill-over effect in all aspects of their lives.

The findings also provides an insight into policy making thus, programmes and policy strategies intended to promote intrapreneurship characterised by innovativeness and proactiveness in SMEs must take into account both organisational and individual factors. In line with organisational factors, assisting SMEs with the needed resources (raw materials, machinery and equipment) will suffice. On the individual level, much emphasis should be on targeting strategies to enhance employees' self-efficacy since a highly efficacious employee could be a potential intrapreneur. The National Board for Small Scale Industry (NBSSI) and other relevant stakeholders could also institutionalise clear policy inclined to the training of SMEs on how to develop and/or improve their self-efficacy beliefs.

### **Contribution of the Study**

Based on the findings of the study, it is clear that all things being equal it could be theorized that whenever self-efficacy beliefs and outcome expectations are perceived positively among employees in SMEs in fresh fruit juice processing, it may not necessarily lead to an intrapreneurial outcome unless there are appropriate and meaningful resources available. Thus, sometimes, the belief in what the employee can do or what they expect as the outcome of their actions may be influenced by other factors such as resources availability. Resource availability may enhance the potency of employees' belief in their abilities leading to intrapreneurial practices within the firms.

With reference to self-efficacy theory, Vroom expectancy theory; findings from this study contribute by establishing that it is not always a positive self-efficacy beliefs that makes individuals to succeed as Bandura (1977, 1997) asserted, neither is it being able to select the best alternative from among the many alternatives (Vroom 1964) that matters, but the presence of meaningful and appropriate resources should be key in assessing an individual's positive self-efficacy towards a behaviour or assessing their level of expectancy towards performing a given task. Furthermore, findings from the study reveal that outcome expectation is not a strong predictor of behaviour. This could partly explain why outcome expectation was not more explicitly mentioned in Bandura (1977) subsequent work as critics of Bandura argue.

In addition, measurement of intrapreneurship has not been conclusive in literature. However, innovativeness and proactiveness have been recorded in literature as robust measures of intrapreneurship. This study confirms that innovativeness and proactiveness are core measures of intrapreneurship; in this

case for small businesses. In addition, the study contributes to factors which could lead to the emergence of intrapreneurship in SMEs by building a model to serve as a springboard for the development of employee intrapreneurial behaviour in SMEs of Ghana, and in particular those in fresh fruit juice processing. Thus, the research has contributed to the debate about intrapreneurship in SMEs.

## **Conclusion**

Based on the prime objective of this study, it is concluded that self-efficacy beliefs and outcome expectation explained the variance in employee intrapreneurial behaviour in SMEs. Thus both self-efficacy beliefs and outcome expectation have a positive effect on employee intrapreneurial behaviour. In addition, the explanatory powers of self-efficacy and outcome expectations in predicting intrapreneurial behaviour are shared with the presence of firm resource availability. This shows that the relationship among employee self-efficacy, outcome expectations and intrapreneurial behaviour, flows through the availability of firm resources. Hence, firm resource availability mediates perceived self-efficacy, outcome expectation and employee intrapreneurial behaviour.

## **Delimitations and Limitations of the Study**

Despite the insight this study sheds, few limitations also exist. For example the effect of self-efficacy beliefs and outcome expectations on employees' intrapreneurial behaviour of SMEs in the fruit juice processing industry seems promising and can serve as a guiding example for similar experiences. However, when looking at the scope of this study it is clear that only few variables have been included to explain employee intrapreneurial behaviour. More variables are needed to establish this interplay.

In addition, the study focused on SMEs in fruit juice processing only. Although there are several theoretical reasons why findings of this study could be generalised to other SMEs, particularly those in the agro food processing industry, testing these hypotheses amongst a larger group of SMEs and possibly in other countries could lead to a more general study findings. Perhaps other studies could embrace all the players in the agro food processing industry to get more insight on the intrapreneurial behaviour of the agro processing industry.

This study is cross sectional and, as such, it cannot be exploited to derive causal effects. The only effect from cross-sectional is mainly observational. An extension of this study; a longitudinal research, could provide further substantial insight on the causality effect of this topic and concept.

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